

# SCORE Search Results Details for Application 09556178 and Search Result 20101214\_103254\_us-09-556-178- 5.rag.

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This page gives you Search Results detail for the Application 09556178 and Search Result 20101214\_103254\_us-09-556-178-5.rag.

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GenCore version 6.3  
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OM protein - protein search, using sw model

Run on: December 14, 2010, 11:22:17 ; Search time 37 Seconds  
(without alignments)  
5898.160 Million cell updates/sec

Title: US-09-556-178-5  
Perfect score: 882  
Sequence: 1 MEALILEPSLYTVKAILILD.....QTVSQVLQSAKEQIKWSLLR 177

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 6395994 seqs, 1224146475 residues

Total number of hits satisfying chosen parameters: 6395994

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : A\_Geneseq\_201023:\*

1: geneseqp1:\*

2: geneseqp2:\*

3: geneseqp3:\*

SUMMARIES

%

Result No.	Query Score	Match	Length	DB ID	Description
1	882	100.0	177	1 AAY49960	Aay49960 Human ves
2	882	100.0	177	1 AAB03815	Aab03815 Human ves
3	882	100.0	177	1 AAB03789	Aab03789 Human cap
4	882	100.0	177	1 ADO23737	Ado23737 COPI coat
5	882	100.0	177	2 AEJ65021	Aej65021 Liver can
6	882	100.0	177	3 AYI11804	Ayi11804 Human coa
7	845	95.8	177	1 ADO57263	Ado57263 Kidney de
8	673	76.3	210	1 AAY31641	Aay31641 Human tra
9	673	76.3	210	1 ADO23725	Ado23725 COPI coat
10	673	76.3	210	3 AYI11805	Ayi11805 Human coa
11	671	76.1	137	1 AAG01470	Aag01470 Human sec
12	580	65.8	185	1 ADO21857	Ado21857 Human ves
13	564.5	64.0	160	1 ABB60295	Abb60295 Drosophil
14	564.5	64.0	160	2 AFB87634	Afb87634 Fruit fly

15	507.5	57.5	181	2	ARO36046	Aro36046	Soybean c
16	507.5	57.5	181	2	ARO37763	Aro37763	Soybean c
17	507.5	57.5	181	3	AXJ10909	Axj10909	Heteroder
18	507.5	57.5	181	3	AXJ09192	Axj09192	Heteroder
19	493.5	56.0	175	2	ADY65214	Ady65214	S. manson
20	441.5	50.1	154	2	ARO39451	Aro39451	Soybean c
21	441.5	50.1	154	3	AXJ12597	Axj12597	Heteroder
22	440	49.9	99	1	AAB54324	Aab54324	Human pan
23	394	44.7	179	2	AFQ47080	Afq47080	Glycine m
24	386	43.8	177	2	ARM90905	Arm90905	Arabidops
25	386	43.8	177	2	ARM94661	Arm94661	Arabidops
26	379	43.0	177	2	ARB02835	Arb02835	Cotton pr
27	375.5	42.6	180	1	AFP84367	Afp84367	Glycine m
28	373	42.3	182	2	ARL84894	Arl84894	Maize pla
29	371	42.1	182	1	AAG35416	Aag35416	Zea mays
30	371	42.1	182	2	ALJ76006	Alj76006	Plant pro
31	371	42.1	182	2	AFC59274	Afc59274	Maize ami
32	371	42.1	182	2	ARM13352	Arm13352	Zea mays
33	371	42.1	182	3	AYF39857	Ayf39857	Plant pol
34	371	42.1	206	1	ADX78919	Adx78919	Plant ful
35	371	42.1	206	2	ANO11441	Ano11441	Zea mays
36	371	42.1	225	1	ADY23237	Ady23237	Plant ful
37	371	42.1	225	2	ANO34177	Ano34177	Zea mays
38	368	41.7	179	1	AAG38559	Aag38559	Arabidops
39	368	41.7	179	2	ALJ80333	Alj80333	Plant pro
40	368	41.7	179	2	ARN03104	Arn03104	Arabidops
41	368	41.7	225	2	ARN03103	Arn03103	Arabidops
42	364	41.3	182	2	ARM52453	Arm52453	Glycine m
43	359	40.7	177	1	ADT60317	Adt60317	Plant pol
44	359	40.7	177	2	AFC50108	Afc50108	Wheat ami
45	359	40.7	177	2	AJG83201	Ajg83201	Triticum

## ALIGNMENTS

## RESULT 1

AY49960

ID AY49960 standard; protein; 177 AA.

XX

AC AY49960;

XX

DT 15-JUN-2007 (revised)

DT 04-FEB-2000 (first entry)

XX

DE Human vesicle trafficking protein 3.

XX

KW Human; vesicle trafficking protein; VTP-1; VTP-2; VTP-3; apoptosis;  
 KW cancer; inflammation; BOND\_PC; coatomer protein complex, subunit zeta 1;  
 KW CGI-120 protein; coatomer protein complex, subunit zeta 1 [Homo sapiens];  
 KW COPZ1; COPZ; CGI-120; zeta1-COP; subunit zeta;  
 KW nonclathrin coat protein zeta1-COP;  
 KW coatomer protein complex, subunit zeta 1 [Mus musculus]; D4Ert360e;  
 KW 5930435A22Rik; AA407760; MGC118060;  
 KW similar to Coatomer zeta-1 subunit (Zeta-1 coat protein) (Zeta-1 COP);  
 KW LOC609925; LOC607013;  
 KW coatomer protein complex, subunit zeta 1, isoform CRA\_a;  
 KW coatomer protein complex, subunit zeta 1, isoform CRA\_a [Homo sapiens];  
 KW unnamed protein product; unnamed protein product [Mus musculus];  
 KW hypothetical protein; hypothetical protein [Pongo pygmaeus]; HSPC181;  
 KW HSPC181 [Homo sapiens]; z-cop; z-cop [Homo sapiens];  
 KW Coatomer protein complex, subunit zeta 1 [Homo sapiens];  
 KW CGI-120 protein [Homo sapiens]; zeta1-COP [Homo sapiens];  
 KW unnamed protein product [Macaca fascicularis];  
 KW Coatomer protein complex, subunit zeta 1 [Mus musculus];  
 KW nonclathrin coat protein zeta-COP;  
 KW nonclathrin coat protein zeta-COP [Mus musculus]; Copz1 protein;

KW Copz1 protein [Mus musculus]; GO5783; GO6886; GO6888; GO6890; GO6891;  
 KW GO16020; GO30126; GO30662; GO5198; GO8565.  
 XX  
 OS Homo sapiens.  
 XX  
 PN US5989859-A.  
 XX  
 PD 23-NOV-1999.  
 XX  
 PF 07-NOV-1997; 97US-00967364.  
 XX  
 PR 07-NOV-1997; 97US-00967364.  
 XX  
 PA (INCY-) INCYTE PHARM INC.  
 XX  
 PI Bandman O, Guegler KJ, Corley NC, Lal P, Shah P;  
 XX  
 DR WPI; 2000-022782/02.  
 DR N-PSDB; AAZ35835.  
 DR PC:NCBI; gi7706337.  
 DR PC:SWISSPROT; P61923, P61924, Q5R5F2.  
 DR PC:BIND; 54453.  
 XX  
 PT Novel vesicle trafficking proteins used in the diagnosis, prevention, and  
 PT treatment of inflammation or cancer.  
 XX  
 PS Claim 9; Fig 7; 55pp; English.  
 XX  
 CC The present sequence represents the human vesicle trafficking protein  
 CC designated VTP-3. VTPs can be used in a method for preventing or treating  
 CC disease associated with an increase in apoptosis. The method can treat  
 CC diseases such as cancer and inflammation, by administering a VTP  
 CC antagonist  
 CC  
 CC Revised record issued on 15-JUN-2007 : Enhanced with precomputed  
 CC information from BOND.  
 XX  
 SQ Sequence 177 AA;

Query Match 100.0%; Score 882; DB 1; Length 177;  
 Best Local Similarity 100.0%;  
 Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPYPSVKEQKAFENKNIFNKTHRTDSEIA 60  
     |||||||||||||||||||||||||||||||||||||||||||||||||||||||  
 Db 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPYPSVKEQKAFENKNIFNKTHRTDSEIA 60  
  
 Qy 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKVNVEKRALLENNMEG 120  
     |||||||||||||||||||||||||||||||||||||||||||||||||||||||  
 Db 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKVNVEKRALLENNMEG 120  
  
 Qy 121 LFLAVDEIVDGIVILESDPQQVVHRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177  
     |||||||||||||||||||||||||||||||||||||||||||||||||||  
 Db 121 LFLAVDEIVDGIVILESDPQQVVHRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177

RESULT 2  
 AAB03815  
 ID AAB03815 standard; protein; 177 AA.  
 XX  
 AC AAB03815;  
 XX  
 DT 15-JUN-2007 (revised)  
 DT 13-OCT-2000 (first entry)  
 XX  
 DE Human vesicle trafficking protein-3 (VTP-3) amino acid sequence.  
 XX

KW Vesicle trafficking protein; VTP-3; human; cancer; inflammation; asthma;  
KW foetal development; Crohn's disease; diabetes; multiple sclerosis;  
KW rheumatoid arthritis; infection; ulcerative colitis; proliferation;  
KW irritable bowel syndrome; apoptosis; AIDS; Alzheimer's disease;  
KW Parkinson's disease; osteoporosis; wasting disorder; BOND\_PC;  
KW coatomer protein complex, subunit zeta 1; CGI-120 protein;  
KW coatomer protein complex, subunit zeta 1 [Homo sapiens]; COPZ1; COPZ;  
KW CGI-120; zeta1-COP; subunit zeta; nonclathrin coat protein zeta1-COP;  
KW coatomer protein complex, subunit zeta 1 [Mus musculus]; D4Ert360e;  
KW 5930435A22Rik; AA407760; MGC118060;  
KW similar to Coatomer zeta-1 subunit (Zeta-1 coat protein) (Zeta-1 COP);  
KW LOC609925; LOC607013;  
KW coatomer protein complex, subunit zeta 1, isoform CRA\_a;  
KW coatomer protein complex, subunit zeta 1, isoform CRA\_a [Homo sapiens];  
KW unnamed protein product; unnamed protein product [Mus musculus];  
KW hypothetical protein; hypothetical protein [Pongo pygmaeus]; HSPC181;  
KW HSPC181 [Homo sapiens]; z-cop; z-cop [Homo sapiens];  
KW Coatomer protein complex, subunit zeta 1 [Homo sapiens];  
KW CGI-120 protein [Homo sapiens]; zeta1-COP [Homo sapiens];  
KW unnamed protein product [Macaca fascicularis];  
KW Coatomer protein complex, subunit zeta 1 [Mus musculus];  
KW nonclathrin coat protein zeta-COP;  
KW nonclathrin coat protein zeta-COP [Mus musculus]; Copz1 protein;  
KW Copz1 protein [Mus musculus]; GO5783; GO6886; GO6888; GO6890; GO6891;  
KW GO16020; GO30126; GO30662; GO5198; GO8565.

XX  
OS Homo sapiens.

XX  
PN US6071703-A.

XX  
PD 06-JUN-2000.

XX  
PF 04-AUG-1999; 99US-00368408.

XX  
PR 07-NOV-1997; 97US-00967364.

XX  
PA (INCY-) INCYTE PHARM INC.

XX  
PI Guegler KJ, Shah P, Corley NC, Bandman O, Lal P;

XX  
DR WPI; 2000-422079/36.

DR N-PSDB; AAA59875.

DR PC:NCBI; gi7706337.

DR PC:SWISSPROT; P61923, P61924, Q5R5F2.

DR PC:BIND; 54453.

XX  
PT Identifying polynucleotides encoding vesicle trafficking proteins (VTP)  
PT for treating and preventing e.g. inflammation, by detecting a  
PT hybridization complex of a nucleic acid from a sample and a  
PT polynucleotide encoding a VTP.

XX  
PS Claim 1; Fig 7; 55pp; English.

CC This sequence represents a human vesicle trafficking protein (VTP-3)  
CC amino acid sequence. VTP-3 encoding cDNA was isolated from an aortic  
CC tissue cDNA library (HEAONOT03). VTP-3 has structural and chemical  
CC homology with a subunit of cow coatomer protein, zeta COP. The present  
CC invention relates to a method for detecting human VTP encoding  
CC polynucleotide sequences and includes nucleotide and protein sequences  
CC for human VTP-1, VTP-2 and VTP-3. Northern analysis of VTP-1, 2, and 3  
CC shows that their expression is associated with cancer, inflammation and  
CC foetal/infant development. The method of the invention is useful for  
CC screening and identifying a polynucleotide encoding a human VTP, which  
CC may be used for the diagnosis, prevention, or treatment of inflammation  
CC associated disorder, e.g. asthma, Crohn's disease, diabetes, multiple  
CC sclerosis, rheumatoid arthritis, infections, ulcerative colitis and  
CC irritable bowel syndrome. Other diseases and disorders identified,

CC prevented or treated with polynucleotide sequences encoding VTP include  
 CC those associated with cell proliferation or apoptosis, such as AIDS,  
 CC Alzheimer's disease, Parkinson's disease, osteoporosis, wasting diseases  
 CC and cancer

CC  
 CC Revised record issued on 15-JUN-2007 : Enhanced with precomputed  
 CC information from BOND.

XX  
 SQ Sequence 177 AA;

Query Match 100.0%; Score 882; DB 1; Length 177;  
 Best Local Similarity 100.0%;  
 Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60  
 |||||||

Db 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60

Qy 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLENMEG 120  
 |||||||

Db 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLENMEG 120

Qy 121 LFLAVDEIVDGIVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177  
 |||||||

Db 121 LFLAVDEIVDGIVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177

### RESULT 3

AAB03789

ID AAB03789 standard; protein; 177 AA.

XX

AC AAB03789;

XX

DT 15-JUN-2007 (revised)

DT 26-OCT-2000 (first entry)

XX

DE Human capsid protein zeta-COP amino acid sequence.

XX

KW Human; capsid-protein; zeta-COP; BOND\_PC;  
 KW coatomer protein complex, subunit zeta 1; CGI-120 protein;  
 KW coatomer protein complex, subunit zeta 1 [Homo sapiens]; COPZ1; COPZ;  
 KW CGI-120; zeta1-COP; subunit zeta; nonclathrin coat protein zeta1-COP;  
 KW coatomer protein complex, subunit zeta 1 [Mus musculus]; D4Ertd360e;  
 KW 5930435A22Rik; AA407760; MGC118060;  
 KW similar to Coatomer zeta-1 subunit (Zeta-1 coat protein) (Zeta-1 COP);  
 KW LOC609925; LOC607013;  
 KW coatomer protein complex, subunit zeta 1, isoform CRA\_a;  
 KW coatomer protein complex, subunit zeta 1, isoform CRA\_a [Homo sapiens];  
 KW unnamed protein product; unnamed protein product [Mus musculus];  
 KW hypothetical protein; hypothetical protein [Pongo pygmaeus]; HSPC181;  
 KW HSPC181 [Homo sapiens]; z-cop; z-cop [Homo sapiens];  
 KW Coatomer protein complex, subunit zeta 1 [Homo sapiens];  
 KW CGI-120 protein [Homo sapiens]; zeta1-COP [Homo sapiens];  
 KW unnamed protein product [Macaca fascicularis];  
 KW Coatomer protein complex, subunit zeta 1 [Mus musculus];  
 KW nonclathrin coat protein zeta-COP;  
 KW nonclathrin coat protein zeta-COP [Mus musculus]; Copz1 protein;  
 KW Copz1 protein [Mus musculus]; GO5783; GO6886; GO6888; GO6890; GO6891;  
 KW GO16020; GO30126; GO30662; GO5198; GO8565.

XX

OS Homo sapiens.

XX

PN CN1248624-A.

XX

PD 29-MAR-2000.

XX

PF 22-SEP-1998; 98CN-00119744.

XX  
 PR 22-SEP-1998; 98CN-00119744.  
 XX  
 PA (XINH-) XINHUANGPU FUDAN GENE ENG CO LTD SHANGHA.  
 XX  
 PI Yu L, Tu Q, Fu Q;  
 XX  
 DR WPI; 2000-431993/38.  
 DR N-PSDB; AAA59847.  
 DR PC:NCBI; gi7706337.  
 DR PC:SWISSPROT; P61923, P61924, Q5R5F2.  
 DR PC:BIND; 54453.  
 XX  
 PT Novel human capsid protein subunit coding sequence.  
 XX  
 PS Claim 2; Fig 2; 21pp; Chinese.  
 XX  
 CC This invention relates to a human gene encoding a capsid protein zeta subunit (zeta-COP). The invention also relates to a zeta-COP protein sequence. The present sequence represents the human zeta-COP protein sequence  
 CC  
 CC Revised record issued on 15-JUN-2007 : Enhanced with precomputed information from BOND.  
 XX  
 SQ Sequence 177 AA;  

Query Match 100.0%; Score 882; DB 1; Length 177;  
 Best Local Similarity 100.0%;  
 Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60  
 |||||||  
 Db 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60

Qy 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKVNVEKRALLEMEG 120  
 |||||||  
 Db 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKVNVEKRALLEMEG 120

Qy 121 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177  
 |||||||  
 Db 121 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177

RESULT 4  
 ADO23737  
 ID ADO23737 standard; protein; 177 AA.  
 XX  
 AC ADO23737;  
 XX  
 DT 15-JUN-2007 (revised)  
 DT 01-JUL-2004 (first entry)  
 XX  
 DE COPI coatomer protein, SEQ ID 26.  
 XX  
 KW Cytostatic; nuclear envelope breakdown; nuclear pore protein; Nup153;  
 KW COPI coatomer complex; cancer; BOND\_PC;  
 KW coatomer protein complex, subunit zeta 1; CGI-120 protein;  
 KW coatomer protein complex, subunit zeta 1 [Homo sapiens]; COPZ1; COPZ;  
 KW CGI-120; zeta1-COP; subunit zeta; nonclathrin coat protein zeta1-COP;  
 KW coatomer protein complex, subunit zeta 1 [Mus musculus]; D4Ertd360e;  
 KW 5930435A22Rik; AA407760; MGC118060;  
 KW similar to Coatomer zeta-1 subunit (Zeta-1 coat protein) (Zeta-1 COP);  
 KW LOC609925; LOC607013;  
 KW coatomer protein complex, subunit zeta 1, isoform CRA\_a;  
 KW coatomer protein complex, subunit zeta 1, isoform CRA\_a [Homo sapiens];  
 KW unnamed protein product; unnamed protein product [Mus musculus];

KW hypothetical protein; hypothetical protein [Pongo pygmaeus]; HSPC181;  
 KW HSPC181 [Homo sapiens]; z-cop; z-cop [Homo sapiens];  
 KW Coatomer protein complex, subunit zeta 1 [Homo sapiens];  
 KW CGI-120 protein [Homo sapiens]; zeta1-COP [Homo sapiens];  
 KW unnamed protein product [Macaca fascicularis];  
 KW Coatomer protein complex, subunit zeta 1 [Mus musculus];  
 KW nonclathrin coat protein zeta-COP;  
 KW nonclathrin coat protein zeta-COP [Mus musculus]; Copz1 protein;  
 KW Copz1 protein [Mus musculus].

XX  
 OS Unidentified.

XX  
 PN WO2004027381-A2.

XX  
 PD 01-APR-2004.

XX  
 PF 17-SEP-2003; 2003WO-US029267.

XX  
 PR 17-SEP-2002; 2002US-0411248P.

XX  
 PA (UTAH ) UNIV UTAH RES FOUND.

XX  
 PI Ulmann KS, Liu J, Prunuske A, Dimaano C;

DR WPI; 2004-340314/31.

DR N-PSDB; ADO23736.

DR PC:NCBI; gi4929709.

DR PC:SWISSPROT; P61923, P61924, Q5R5F2.

DR PC:BOND; 54453.

XX  
 PT New composition comprising a molecule that inhibits nuclear envelope breakdown, useful in treating cancer, e.g. lymphoma, sarcoma or glioma.

PS Claim 22; SEQ ID NO 26; 180pp; English.

CC The present invention relates to a composition comprising a molecule that inhibits nuclear envelope breakdown by interfering with the interaction between nuclear pore protein Nup153 and COPI coatomer complex. The composition is useful in treating, inhibiting or preventing cancer, e.g. lymphoma, leukaemia, mycosis fungoide, carcinoma, adenocarcinoma, sarcoma, glioma, blastoma, neuroblastoma, plasmacytoma, histiocytoma, melanoma, adenoma, hypoxic tumour, myeloma, AIDS-related lymphoma or AIDS-related sarcoma or metastatic, bladder, brain or nervous system cancer, glioblastoma or ovarian, skin or liver cancer, squamous cell carcinomas of the mouth, throat, larynx, and lung or colon, cervical, breast, epithelial, renal, genitourinary or pulmonary cancer, oesophageal carcinoma, head and neck carcinoma or haematopoietic, testicular, colorectal, prostatic or pancreatic cancer. The present sequence was used to illustrate the invention.

CC Revised record issued on 15-JUN-2007 : Enhanced with precomputed information from BOND.

XX  
 SQ Sequence 177 AA;

```
Query Match          100.0%;  Score 882;  DB 1;  Length 177;
Best Local Similarity 100.0%;
Matches 177;  Conservative 0;  Mismatches 0;  Indels 0;  Gaps 0;
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Qy 1 MEALILEEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60
 ||||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||

Db 1 MEALILEEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60

Qy 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNEVKRALLEMEG 120
 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||

Db 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNEVKRALLEMEG 120

Qy 121 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177  
           |||||||||||||||||||||||||||||||||||||||||||||||  
 Db 121 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177

RESULT 5

AEJ65021

ID AEJ65021 standard; protein; 177 AA.

XX

AC AEJ65021;

XX

DT 15-JUN-2007 (revised)

DT 05-OCT-2006 (first entry)

XX

DE Liver cancer associated protein SEQ ID NO 63.

XX

KW protein production; recombinant DNA; liver tumor; cytostatic; neoplasm;  
 KW gastrointestinal disease; BOND\_PC;  
 KW coatomer protein complex, subunit zeta 1; CGI-120 protein;  
 KW coatomer protein complex, subunit zeta 1 [Homo sapiens]; COPZ1; COPZ;  
 KW CGI-120; zeta1-COP; subunit zeta; nonclathrin coat protein zeta1-COP;  
 KW coatomer protein complex, subunit zeta 1 [Mus musculus]; D4Ertd360e;  
 KW 5930435A22Rik; AA407760; MGC118060;  
 KW similar to Coatomer zeta-1 subunit (Zeta-1 coat protein) (Zeta-1 COP);  
 KW LOC609925; LOC607013;  
 KW coatomer protein complex, subunit zeta 1, isoform CRA\_a;  
 KW coatomer protein complex, subunit zeta 1, isoform CRA\_a [Homo sapiens];  
 KW unnamed protein product; unnamed protein product [Mus musculus];  
 KW hypothetical protein; hypothetical protein [Pongo pygmaeus]; HSPC181;  
 KW HSPC181 [Homo sapiens]; z-cop; z-cop [Homo sapiens];  
 KW Coatomer protein complex, subunit zeta 1 [Homo sapiens];  
 KW CGI-120 protein [Homo sapiens]; zeta1-COP [Homo sapiens];  
 KW unnamed protein product [Macaca fascicularis];  
 KW Coatomer protein complex, subunit zeta 1 [Mus musculus];  
 KW nonclathrin coat protein zeta-COP;  
 KW nonclathrin coat protein zeta-COP [Mus musculus]; Copz1 protein;  
 KW Copz1 protein [Mus musculus]; GO5783; GO6886; GO6888; GO6890; GO6891;  
 KW GO16020; GO30126; GO30662; GO5198; GO8565.

XX

OS Homo sapiens.

XX

PN CN1618808-A.

XX

PD 25-MAY-2005.

XX

PF 21-NOV-2003; 2003CN-10108764.

XX

PR 21-NOV-2003; 2003CN-10108764.

XX

PA (SHAN-) SHANGHAI HUMAN GENOME RES CENT.

XX

PI Zhu Z, Han Z;

XX

DR WPI; 2005-640540/66.

DR SWISSPROT; Q9Y3C3.

DR PC:NCBI; gi7706337.

DR PC:SWISSPROT; P61923, P61924, Q5R5F2.

DR PC:BIND; 54453.

XX

PT Liver cancer related protein and its coding sequence and use.

XX

PS Claim 1; SEQ ID NO 63; 26pp; Chinese.

XX

CC The invention describes a novel liver cancer associated protein, the  
 CC polynucleotide for coding it, the process for preparing said protein by  
 CC recombination, and the application of said polynucleotide. This is the  
 CC amino acid sequence of a liver cancer associated protein.

CC Revised record issued on 15-JUN-2007 : Enhanced with precomputed information from BOND.  
XX  
SQ Sequence 177 AA;

Query Match 100.0%; Score 882; DB 2; Length 177;  
Best Local Similarity 100.0%;  
Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60  
|||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||  
Db 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60

Qy 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKVNVEKRALLENMEG 120  
|||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||  
Db 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKVNVEKRALLENMEG 120

Qy 121 LFLAVDEIVDGKVILESDPQQVVHRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177  
|||||||||||||||||||||||||||||||||||||||||||||||||||||  
Db 121 LFLAVDEIVDGKVILESDPQQVVHRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177

RESULT 6  
AYI11804  
ID AYI11804 standard; protein; 177 AA.  
XX  
AC AYI11804;  
XX  
DT 28-OCT-2010 (first entry)  
XX  
DE Human coatomer subunit zeta-1 protein, SEQ ID 29.  
XX  
KW Bio-nanoparticle element; Coatomer subunit zeta-1; nanotechnology;  
KW BOND\_PC; coatomer protein complex, subunit zeta 1; CGI-120 protein;  
KW COPZ1; COPZ; CGI-120; zetal-COP; subunit zeta;  
KW nonclathrin coat protein zetal-COP; D4Ert360e; 5930435A22Rik; AA407760;  
KW MGC118060;  
KW similar to Coatomer zeta-1 subunit (Zeta-1 coat protein) (Zeta-1 COP);  
KW LOC609925; LOC607013; similar to CGI-120 protein;  
KW PREDICTED: similar to CGI-120 protein [Equus caballus]; LOC100064590;  
KW Copz1\_predicted;  
KW similar to Coatomer subunit zeta-1 (Zeta-1-coat protein) (Zeta-1 COP);  
KW LOC100156765; Coatomer subunit zeta-1; DKFZp469A0331;  
KW coatomer protein complex, subunit zeta 1, isoform CRA\_a;  
KW unnamed protein product; hypothetical protein; HSPC181; z-cop;  
KW nonclathrin coat protein zeta-COP; Copz1 protein; GO5783; GO6886; GO6888;  
KW GO6890; GO6891; GO16020; GO30126; GO30662; GO5198; GO8565.  
XX  
OS Homo sapiens.  
XX  
PN US2010226856-A1.  
XX  
PD 09-SEP-2010.  
XX  
PF 06-MAR-2009; 2009US-00399906.  
XX  
PR 06-MAR-2009; 2009US-00399906.  
XX  
PA (VITA/) VITALIANO F.  
PA (VITA/) VITALIANO G.  
XX  
PI Vitaliano F, Vitaliano G;  
XX  
DR WPI; 2010-L54477/62.  
DR SWISSPROT; P61923.  
DR PC:NCBI; gi7706337.

DR PC:SWISSPROT; P61923, P61924, Q5R5F2.  
 DR PC:BIND; 54453.

XX

PT New dynamic bio-nanoparticle element, useful in a multifunction nanoscale  
 PT bio-nanoparticle platform, such as a biomedical platform, bio-molecular  
 PT platform, electronics platform, and information processing platform.

XX

PS Claim 1; SEQ ID NO 29; 121pp; English.

XX

CC The present invention relates to a dynamic bio-nanoparticle element  
 CC useful in a multifunction nanoscale bio-nanoparticle platform. The bio-  
 CC nanoparticle element comprises a clathrin or coatomer cage subset  
 CC element, forming in vitro less than a fully assembled clathrin or  
 CC coatomer cage element, having attributes, properties, characteristics,  
 CC compositions, behaviors and capabilities, that differ in respect from a  
 CC fully assembled clathrin or coatomer cage element and nanoscale elements  
 CC of types formed in whole or in part from purified, synthetic or  
 CC recombinant amino acid molecule elements and their residue elements. The  
 CC invention also provides a method for forming a dynamic bio-nanoparticle  
 CC element. The dynamic bio-nanoparticle element is useful in a  
 CC multifunction nanoscale bio-nanoparticle platform such as a biomedical  
 CC platform, bio-molecular platform, electronics platform and information  
 CC processing platform. The dynamic bio-nanoparticle element provides self-  
 CC directing, self-replicating, self-adapting, self-repairing, self-  
 CC regulating and self-regenerating methods for one or more minimalist, non-  
 CC cage elements, which can also perform on-the-fly target prioritization.  
 CC The present sequence is a human coatomer subunit zeta-1 protein used in  
 CC the method for forming a dynamic bio-nanoparticle element of the  
 CC invention.

CC

CC Revised record issued on 13-OCT-2010 : Enhanced with precomputed  
 CC information from BOND.

XX

SQ Sequence 177 AA;

Query Match 100.0%; Score 882; DB 3; Length 177;  
 Best Local Similarity 100.0%;  
 Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MEALILEEPSLYTVKAILILDNDGDRLFAKYDDTYPYKEQKAFENIFNKTHRTDSEIA 60  
 |||||||

Db 1 MEALILEEPSLYTVKAILILDNDGDRLFAKYDDTYPYKEQKAFENIFNKTHRTDSEIA 60

Qy 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKVNVEKRALLEMEG 120  
 |||||||

Db 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKVNVEKRALLEMEG 120

Qy 121 LFLAVDEIVDGGVILESDPQQVVHRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177  
 |||||||

Db 121 LFLAVDEIVDGKVILESDPQQVVHRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177

RESULT 7

ADO57263

ID ADO57263 standard; protein; 177 AA.

XX

AC ADO57263;

XX

DT 15-JUN-2007 (revised)

DT 15-JUL-2004 (first entry)

XX

DE Kidney development associated protein seqid 30.

XX

KW nephrotropic; cardiant; antiinfertility; cerebroprotective;  
 KW neuroprotective; muscular; cytostatic; osteopathic; gene therapy;  
 KW kidney development; kidney disorder; developmental disorder;  
 KW circulatory disorder; hearing disorder; heart defect; infertility;

KW stroke; mental retardation; muscle defect; proliferative disorder;  
 KW bone defect; bone disorder; zebrafish; BOND\_PC; zetal-cop;  
 KW zetal-cop [Danio rerio]; copz1; CHUNP6876;  
 KW nonclathrin coat protein zetal-COP;  
 KW nonclathrin coat protein zetal-COP [Danio rerio]; G06810; G06886;  
 KW G030662; G08565; G019012.

XX  
 OS Danio rerio.

XX  
 PN US2004068763-A1.

XX  
 PD 08-APR-2004.

XX  
 PF 28-MAR-2003; 2003US-00403571.

XX  
 PR 29-MAR-2002; 2002US-0368760P.

XX  
 PA (HOPK/) HOPKINS N.  
 PA (GOLL/) GOLLING G.  
 PA (AMST/) AMSTERDAM A.  
 PA (SUNZ/) SUN Z.

XX  
 PI Hopkins N, Golling G, Amsterdam A, Sun Z;

XX  
 DR WPI; 2004-304692/28.

DR N-PSDB; ADO57262.

DR PC:NCBI; gi18858455.

XX  
 PT New 459 nucleic acids and encoded polypeptides, useful for diagnosing,  
 PT treating or preventing a kidney disorder in an organism, or in screening  
 PT for compounds that modulate the development of an organism.

XX  
 PS Disclosure; SEQ ID NO 30; 347pp; English.

CC The invention describes an isolated nucleic acid molecule (I) comprising  
 CC a sequence having at least 75% sequence identity to the 459 nucleic acid  
 CC sequence of 2808 base pairs (SEQ ID NO: 59) given in the specification,  
 CC over at least 600 contiguous base pairs, where the nucleic acid functions  
 CC in kidney development. (I) is useful for treating or preventing a kidney  
 CC disorder in an organism, where the nucleic acid elicits an alteration in  
 CC expression of a 459 nucleic acid sequence in the organism and  
 CC subsequently treats or prevents a kidney disorder. The nucleic acid may  
 CC also be used in diagnosing, preventing and treating a variety of  
 CC mammalian diseases and developmental disorders (e.g. circulatory  
 CC disorders, hearing disorders, heart defect, infertility, stroke, mental  
 CC retardation, muscle defects, proliferative disorders, or bone defects or  
 CC disorders) as well as in screening for compounds that modulate the  
 CC development of an organism as a whole or of specific tissues or organs  
 CC within that organism. This is the amino acid sequence of a kidney  
 CC development associated protein.

CC  
 CC Revised record issued on 15-JUN-2007 : Enhanced with precomputed  
 CC information from BOND.

XX  
 SQ Sequence 177 AA;

Query Match 95.8%; Score 845; DB 1; Length 177;  
 Best Local Similarity 93.2%;  
 Matches 165; Conservative 11; Mismatches 1; Indels 0; Gaps 0;

Qy 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60  
 |:|||||||||:||:||||:||:||||||||:|||||||||||||||||

Db 1 MDTLILEPSLYTVKAVLIMDNDGERLYAKYYDDTYPTVKEQKAFEKNIFNKTHRTDSEIA 60

Qy 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKVNVEKRALLEMEG 120  
 |||||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||

Db 61 LLEGLTVVYKSNIDLYFYVIGSSHENELMLMSVLNCLFDLSQMLRKVNVEKRALLEMEG 120

Qy 121 LFLAVDEIVDGGVILESDPQQVVHRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177  
           |||||||||||||||||||||:|||||||:|||||||||||||||  
 Db 121 LFLAVDEIVDGGVILESDPQQVVHRVALRGDDVPLTEQTVLQSAKEQIKWSLLR 177

RESULT 8

AAY31641

ID AAY31641 standard; protein; 210 AA.

XX

AC AAY31641;

XX

DT 02-NOV-1999 (first entry)

XX

DE Human transport-associated protein-3 (TRANP-3).

XX

KW Transport-associated protein; TRANP; nuclear pore; nuclear transport;

KW vesicle trafficking; cancer; cystic fibrosis; multidrug resistance;

KW hypercholesterolaemia; diagnosis; treatment.

XX

OS Homo sapiens.

XX

FH Key Location/Qualifiers

FT Modified-site 44

FT /note= "O-phosphorylated by tyrosine kinase"

FT Modified-site 45

FT /note= "O-phosphorylated by protein kinase C"

FT Modified-site 55

FT /note= "Amidation site"

FT Modified-site 70

FT /note= "O-phosphorylated by casein kinase II or protein kinase C"

FT Modified-site 83

FT /note= "N-glycosylated"

FT Modified-site 85

FT /note= "O-phosphorylated by protein kinase C"

FT Modified-site 86

FT /note= "O-phosphorylated by casein kinase II"

FT Modified-site 88

FT /note= "O-phosphorylated by casein kinase II"

FT Modified-site 111

FT /note= "O-phosphorylated by tyrosine kinase"

FT Modified-site 115

FT /note= "O-phosphorylated by casein kinase II"

FT Modified-site 199

FT /note= "O-phosphorylated by casein kinase II or protein kinase C"

XX

PN WO9941373-A2.

XX

PD 19-AUG-1999.

XX

PF 05-FEB-1999; 99WO-US002527.

XX

PR 11-FEB-1998; 98US-00021764.

XX

PA (INCY-) INCYTE PHARM INC.

XX

PI Au-Young J, Hillman JL, Lal P, Guegler KJ, Corley NC, Yue H;

PI Bandman O, Baughn MR;

XX

DR WPI; 1999-508646/42.

DR N-PSDB; AAZ11733.

XX

PT Human TRANP coding sequences, used to treat transport disorders and  
cancer.

XX

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This page gives you Search Results detail for the Application 09556178 and Search Result 20101214\_103255\_us-09-556-178-5.rpr.

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OM protein - protein search, using sw model

Run on: December 14, 2010, 11:24:11 ; Search time 2 Seconds  
(without alignments)  
7139.284 Million cell updates/sec

Title: US-09-556-178-5  
Perfect score: 882  
Sequence: 1 MEALILEPSLYTVKAILILD.....QTVSQVLQSAKEQIKWSSLR 177

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : PIR\_80:  
1: pir1:  
2: pir2:  
3: pir3:  
4: pir4:  
SUMMARIES

Result	No.	Query	Score	Match	Length	DB	ID	Description
1	875	99.2	177	2	A49465			coatomer zeta chain
2	499	56.6	184	2	T23002			hypothetical protein
3	344	39.0	162	2	C96635			probable coatomer
4	308	34.9	189	2	S52521			coatomer protein z
5	299.5	34.0	190	2	T41417			coatomer zeta subunit
6	267	30.3	153	2	T01831			hypothetical protein
7	141.5	16.0	145	2	T08407			clathrin coat assembly
8	118	13.4	143	2	B84581			probable clathrin
9	117	13.3	446	2	S59646			clathrin coat assembly
10	116	13.2	194	2	S56796			YAP19 protein homo
11	112.5	12.8	141	2	C71605			clathrin coat assembly
12	108	12.2	157	2	T31801			hypothetical protein
13	106.5	12.1	143	2	T40635			clathrin coat assembly
14	99	11.2	165	2	S62563			adapton complex sm
15	98	11.1	1472	2	S67195			probable membrane
16	97.5	11.1	441	2	B49837			clathrin-associate
17	90.5	10.3	214	2	S51405			synaptobrevin SEC2
18	90	10.2	1271	2	T08607			hypothetical protein
19	88.5	10.0	290	2	C96911			transcriptional regulator
20	87.5	9.9	475	2	S65290			clathrin-associate
21	86	9.8	158	2	A40535			clathrin-associate
22	86	9.8	161	2	E84551			clathrin assembly
23	86	9.8	162	2	T06116			probable clathrin-
24	85.5	9.7	663	2	B70460			exonuclease ABC c
25	85.5	9.7	699	2	T18984			hypothetical protein
26	85	9.6	380	2	D64129			probable 8-amino-7
27	84.5	9.6	439	2	S78378			maturase-like protein
28	84.5	9.6	863	2	B72344			tRNA nucleotidyl transferase
29	84	9.5	132	2	T02991			clathrin coat assembly
30	84	9.5	142	2	T15957			hypothetical protein
31	83.5	9.5	412	2	E97736			mitochondrial protein
32	83	9.4	142	2	B40535			clathrin-associate
33	83	9.4	156	2	S37757			clathrin-associate
34	83	9.4	410	2	S64451			hypothetical protein
35	83	9.4	896	2	T47645			centromere protein
36	82.5	9.4	324	2	C90492			hypothetical protein
37	82.5	9.4	569	1	D64215			conserved hypothetical
38	82.5	9.4	909	2	A63314			exonuclease ABC c
39	82.5	9.4	1104	2	S36773			GTPase-activating
40	82	9.3	416	2	D70347			cell division protein
41	82	9.3	659	2	G81334			probable N-acetylmuramoyl peptidase
42	82	9.3	686	2	T23721			hypothetical protein
43	82	9.3	725	2	G90555			vacB-like (shigella)
44	82	9.3	803	1	E70041			probable copper-tr
45	82	9.3	1130	2	T21134			hypothetical protein

#### ALIGNMENTS

#### RESULT 1

A49465  
coatomer zeta chain - bovine  
C;Species: Bos primigenius taurus (cattle)  
C;Date: 03-May-1994 #sequence\_revision 03-May-1994 #text\_change 09-Jul-2004  
C;Accession: A49465  
R;Kuge, O.; Hara-Kuge, S.; Orci, L.; Ravazzola, M.; Amherdt, M.; Tanigawa, G.; Wieland, F.T.; Rothman, J.E.  
J. Cell Biol. 123, 1727-1734, 1993  
A;Title: zeta-COP, a subunit of coatomer, is required for COP-coated vesicle assembly.  
A;Reference number: A49465; MUID:94103328; PMID:8276893  
A;Accession: A49465  
A;Status: preliminary  
A;Molecule type: mRNA

A;Residues: 1-177 <KUG>  
A;Cross-references: UNIPROT:P35604; UNIPARC:UPI0000127EF0; GB:X75935; NID:g441485; PIDN:CAA53539.1; PID:g441486  
C;Superfamily: Vesicle coat complex COPI, zeta subunit

Query Match 99.2%; Score 875; DB 2; Length 177;  
Best Local Similarity 98.9%;  
Matches 175; Conservative 1; Mismatches 1; Indels 0; Gaps 0;  
  
Qy 1 MEALILEPSLYTVKAIIILNDNGDRLFAKYDDTYPNVKEQKAFENKNIFNKTHRRTDSEIA 60  
Db 1 MEALILQPSLYTVKAIIILNDNGDRLFAKYDDTYPNVKEQKAFENKNIFNKTHRRTDSEIA 60  
  
Qy 61 LLEGLTVVYKSSIDLFFYVIGSSYENELMLMAVLNCLFDLSLSQMLRKVNVEKRALLENNMEG 120  
Db 61 LLEGLTVVYKSSIDLFFYVIGSSYENELMLMTLNCLFDLSLSQMLRKVNVEKRALLENNMEG 120  
  
Qy 121 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177  
Db 121 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177

## RESULT 2

T23002

hypothetical protein F59E10.3 - Caenorhabditis elegans

C;Species: Caenorhabditis elegans

C;Date: 15-Oct-1999 #sequence\_revision 15-Oct-1999 #text\_change 09-Jul-2004

C;Accession: T23002

R;Swinburne, J.

submitted to the EMBL Data Library, September 1994

A;Reference number: Z19650

A;Accession: T23002

A;Status: preliminary; translated from GB/EMBL/DDBJ

A;Molecule type: DNA

A;Residues: 1-184 &lt;WIL&gt;

A;Cross-references: UNIPROT:O17901; UNIPARC:UPI0000127EF1; EMBL:Z36949; PIDN:CAA85416.1; GSPDB:GN00020; CESP:F59E10.3

A;Experimental source: clone F59E10

C;Genetics:

A;Gene: CESP:F59E10.3

A;Map position: 2

A;Introns: 6/3; 30/3; 60/1; 135/2

C;Superfamily: Vesicle coat complex COPI, zeta subunit

Query Match 56.6%; Score 499; DB 2; Length 184;  
Best Local Similarity 54.9%;  
Matches 96; Conservative 44; Mismatches 29; Indels 6; Gaps 3;  
  
Qy 9 SLYTVKAILILNDNGDRLFAKYD-DTYPNVKEQKAFENKNIFNKTHR-TDSEIALLEG 66  
Db 10 SLYSIKGIVLDQDGNCNRVLAKYYDRITFGTVKEQKAFESLFSKTSRNTSADILLDGVT 69  
  
Qy 67 VVYKSSIDLFFYVIGSSYENELMLMAVLNCLFDLSLSQMLRKVNVEKRALLENNMEGLFLAVD 126  
Db 70 CLYRSNVLDYFYVLGSTRNELFLDATLTLDAVSVVLRKVNVEKKALIDSMDTIMLIID 129  
  
Qy 127 EIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQV---LQSAKEQIKWSLLR 177  
Db 130 EICDEGIIMETDAQAVQRTALKSDEVFS3DQSVSQ1GFSFMKSANEQFKWSLLK 184

## RESULT 3

C96635

probable coatomer zeta subunit T7P1.11 [imported] - Arabidopsis thaliana

C;Species: Arabidopsis thaliana (mouse-ear cress)

C;Date: 02-Mar-2001 #sequence\_revision 02-Mar-2001 #text\_change 09-Jul-2004

C;Accession: C96635

R;Theologis, A.; Ecker, J.R.; Palm, C.J.; Federspiel, N.A.; Kaul, S.; White, O.; Alonso, J.; Altaf, H.; Araujo, R.; Bowman, C.L.; Brooks, S.Y.; Buehler, E.; Chan, i Nature 408, 816-820, 2000  
A;Authors: Hunter, J.L.; Jenkins, J.; Johnson-Hopson, C.; Khan, S.; Khaykin, E.; Kim, C.J.; Koo, H.L.; Kremenetskaia, I.; Kurtz, D.B.; Kwan, A.; Lam, B.; Langin-Hoe  
A;Authors: Salzberg, S.L.; Schwartz, J.R.; Shinn, P.; Southwick, A.M.; Sun, H.; Tallon, L.J.; Tambunga, G.; Toriumi, M.J.; Town, C.D.; Utterback, T.; van Aken, S.;  
A;Title: Sequence and analysis of chromosome 1 of the plant Arabidopsis.  
A;Reference number: A86141; MUID:21016719; PMID:11130712

A;Accession: C96635

A;Status: preliminary

A;Molecule type: DNA

A;Residues: 1-162 &lt;STO&gt;

A;Cross-references: UNIPROT:Q9C956; UNIPARC:UPI000009CDAC; GB:AE005173; NID:g6751687; PIDN:AAF27670.1; GSPDB:GN00141

C;Genetics:

A;Gene: T7P1.11

A;Map position: 1

C;Superfamily: Vesicle coat complex COPI, zeta subunit

Query Match 39.0%; Score 344; DB 2; Length 162;  
Best Local Similarity 45.4%;  
Matches 69; Conservative 33; Mismatches 44; Indels 6; Gaps 2;  
  
Qy 13 VKAIIILNDNGDRLFAKYDDTYPNVKEQKAFENKNIFNKTHR---RTDSEIALLEG 68  
Db 7 VKNILLLDSEGKRVAVKYYSDDWPTNSAQEAFEKSVFTKTQKTNARTEVEVTALENINIV 66  
  
Qy 69 YKSSIDLFFYVIGSSYENELMLMAVLNCLFDLSLSQMLRKVNVEKRALLENNMEGLFLAVDEI 128  
Db 67 YKFVQDLHFFVIGGEENEELILASVLEGLFDATVLLRSNVDKREALDNLLFIFSFDEI 126  
  
Qy 129 VDGGVILESDPQQVVRVALRGED--VPLTEQ 158  
Db 127 IDGGIVLET DANVIAGKAGINSTDPNAPLSEQ 158

## RESULT 4

S52521

coatomer protein zeta chain - yeast (Saccharomyces cerevisiae)

N;Alternate names: protein LPA7w; protein YP8132.03; protein YPL010w; zeta-COP

C;Species: Saccharomyces cerevisiae

C;Date: 08-May-1995 #sequence\_revision 21-Jul-1995 #text\_change 09-Jul-2004

C;Accession: S52521; S59683; JC5152

R;Badcock, K.; Churcher, C.

submitted to the EMBL Data Library, February 1995

A;Reference number: S52521

A;Accession: S52521

A;Molecule type: DNA

A;Residues: 1-189 &lt;BAD&gt;

A;Cross-references: UNIPROT:P53600; UNIPARC:UPI000005319F; EMBL:Z48483; NID:g683777; PIDN:CAA88376.1; PID:g683780; MIPS:YPL010w

# SCORE Search Results Details for Application 09556178 and Search Result 20101214\_103254\_us-09-556-178- 5.rup.

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This page gives you Search Results detail for the Application 09556178 and Search Result 20101214\_103254\_us-09-556-178-5.rup.

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OM protein - protein search, using sw model

Run on: December 14, 2010, 11:23:42 ; Search time 96 Seconds  
(without alignments)  
7637.199 Million cell updates/sec

Title: US-09-556-178-5  
Perfect score: 882  
Sequence: 1 MEALILEPSLYTVKAILILD.....QTVSQVLQSAKEQIKWSLLR 177

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 12869322 seqs, 4158259533 residues

Total number of hits satisfying chosen parameters: 12869322

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : UniProt\_201011:\*

1: uniprot\_sprot:\*

2: uniprot\_trembl:\*

SUMMARIES

%

Result No.	Query Score	Match	Length	DB ID	Description
1	882	100.0	177	1 COPZ1_HUMAN	P61923 RecName: Fu
2	882	100.0	177	1 COPZ1_MOUSE	P61924 RecName: Fu
3	882	100.0	177	1 COPZ1_PONAB	Q5r5f2 RecName: Fu
4	882	100.0	177	2 D4A8T3_RAT	D4a8t3 SubName: Fu
5	882	100.0	177	2 Q542M2_MOUSE	Q542m2 SubName: Fu
6	878	99.5	177	1 COPZ1_BOVIN	P35604 RecName: Fu
7	877	99.4	177	2 Q53FU3_HUMAN	Q53fu3 SubName: Fu
8	847	96.0	177	2 Q28HL1_XENTR	Q28h11 SubName: Fu
9	846	95.9	177	2 A0AUT9_XENLA	A0aut9 SubName: Fu
10	846	95.9	187	2 Q801P3_XENLA	Q801p3 SubName: Fu
11	845	95.8	177	2 Q9IB48_DANRE	Q9ib48 SubName: Fu
12	843	95.6	177	2 Q6GQGO_XENLA	Q6gqg0 SubName: Fu
13	842	95.5	177	2 Q7SXH1_DANRE	Q7sxh1 SubName: Fu
14	836	94.8	177	2 C3KJY4_ANOFI	C3kjy4 SubName: Fu
15	832	94.3	177	2 B5X5K5_SALSA	B5x5k5 SubName: Fu

16	832	94.3	179	2	C1BY80_ESOLU	C1by80	SubName: Fu
17	828	93.9	177	2	B5X8E4_SALSA	B5x8e4	SubName: Fu
18	828	93.9	177	2	C1BHI5_ONCMY	C1bhi5	SubName: Fu
19	828	93.9	177	2	C3KJ46_ANOFI	C3kj46	SubName: Fu
20	825	93.5	177	2	B9EM01_SALSA	B9em01	SubName: Fu
21	819	92.9	175	2	C1BFE7_ONCMY	C1bfe7	SubName: Fu
22	815	92.4	174	2	B5X954_SALSA	B5x954	SubName: Fu
23	814	92.3	177	2	C1BH82_ONCMY	C1bh82	SubName: Fu
24	813	92.2	163	2	Q8R3M1_MOUSE	Q8r3m1	SubName: Fu
25	810	91.8	177	2	B5XDE2_SALSA	B5xde2	SubName: Fu
26	745.5	84.5	154	2	B4DDX8_HUMAN	B4ddx8	SubName: Fu
27	701.5	79.5	173	2	Q9IB47_DANRE	Q9ib47	SubName: Fu
28	692	78.5	189	2	Q6DKF5_DANRE	Q6dkf5	SubName: Fu
29	683.5	77.5	229	2	C3XTB6_BRAFL	C3xtb6	SubName: Fu
30	673.5	76.4	178	2	B9EQ95_SALSA	B9eq95	SubName: Fu
31	673	76.3	179	2	B9EPB0_SALSA	B9epb0	SubName: Fu
32	673	76.3	210	1	COPZ2_HUMAN	Q9p299	RecName: Fu
33	667	75.6	205	1	COPZ2_MOUSE	Q9jhh9	RecName: Fu
34	666.5	75.6	178	2	C1BHL1_ONCMY	C1bhl1	SubName: Fu
35	664	75.3	203	2	C1BFJ5_ONCMY	C1bfj5	SubName: Fu
36	663	75.2	185	2	Q9CTG7_MOUSE	Q9ctg7	SubName: Fu
37	649	73.6	156	2	Q6P383_XENTR	Q6p383	SubName: Fu
38	625.5	70.9	178	2	E0VA85_PEDHC	E0va85	SubName: Fu
39	623	70.6	183	2	A7S1D0_NEMVE	A7s1d0	SubName: Fu
40	621.5	70.5	177	2	Q16K41_AEDAE	Q16k41	SubName: Fu
41	620.5	70.4	177	2	B0W863_CULQU	B0w863	SubName: Fu
42	620.5	70.4	182	2	D6WPS8_TRICA	D6wps8	SubName: Fu
43	620	70.3	181	2	Q16K40_AEDAE	Q16k40	SubName: Fu
44	619.5	70.2	178	2	C4WUX3_ACYPI	C4wux3	SubName: Fu
45	612.5	69.4	177	2	Q7Q5C2_ANOGA	Q7q5c2	SubName: Fu

## ALIGNMENTS

## RESULT 1

COPZ1\_HUMAN

ID COPZ1\_HUMAN Reviewed; 177 AA.  
AC P61923; Q549N6; Q9Y3C3;  
DT 07-JUN-2004, integrated into UniProtKB/Swiss-Prot.  
DT 07-JUN-2004, sequence version 1.  
DT 05-OCT-2010, entry version 66.  
DE RecName: Full=Coatomer subunit zeta-1;  
DE AltName: Full=Zeta-1-coat protein;  
DE Short=Zeta-1 COP;  
GN Name=COPZ1; Synonyms=COPZ; ORFNames=CGI-120, HSPC181;  
OS Homo sapiens (Human).  
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
OC Mammalia; Eutheria; Euarchontoglires; Primates; Haplorrhini;  
OC Catarrhini; Hominidae; Homo.  
OX NCBI\_TaxID=9606;  
RN [1]  
RP NUCLEOTIDE SEQUENCE [MRNA].  
RX MEDLINE=20512057; PubMed=11056392;  
RA Futatsumori M., Kasai K., Takatsu H., Shin H.-W., Nakayama K.;  
RT "Identification and characterization of novel isoforms of COP I  
RT subunits.";  
RL J. Biochem. 128:793-801(2000).  
RN [2]  
RP NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].  
RX MEDLINE=20272150; PubMed=10810093; DOI=10.1101/gr.10.5.703;  
RA Lai C.-H., Chou C.-Y., Ch'ang L.-Y., Liu C.-S., Lin W.-C.;  
RT "Identification of novel human genes evolutionarily conserved in  
RT Caenorhabditis elegans by comparative proteomics.";  
RL Genome Res. 10:703-713(2000).  
RN [3]  
RP NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].

RC TISSUE=Umbilical cord blood;  
RX MEDLINE=20499367; PubMed=11042152; DOI=10.1101/gr.140200;  
RA Zhang Q.-H., Ye M., Wu X.-Y., Ren S.-X., Zhao M., Zhao C.-J., Fu G.,  
RA Shen Y., Fan H.-Y., Lu G., Zhong M., Xu X.-R., Han Z.-G., Zhang J.-W.,  
RA Tao J., Huang Q.-H., Zhou J., Hu G.-X., Gu J., Chen S.-J., Chen Z.;  
RT "Cloning and functional analysis of cDNAs with open reading frames for  
RT 300 previously undefined genes expressed in CD34+ hematopoietic  
RT stem/progenitor cells.";  
RL Genome Res. 10:1546-1560(2000).  
RN [4]  
RP NUCLEOTIDE SEQUENCE [mRNA].  
RA Tu Q., Yu L., Hu P.R., Zhang H.L., Huang J., Zhao S.Y.;  
RT "Cloning and expression of a new human cDNA homology to B.taurus z-cop  
RT mRNA.";  
RL Submitted (JUL-2003) to the EMBL/GenBank/DDBJ databases.  
RN [5]  
RP NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].  
RA Mural R.J., Istrail S., Sutton G.G., Florea L., Halpern A.L.,  
RA Mobarry C.M., Lippert R., Walenz B., Shatkay H., Dew I., Miller J.R.,  
RA Flanigan M.J., Edwards N.J., Bolanos R., Fasulo D., Halldorsson B.V.,  
RA Hannenhalli S., Turner R., Yoosheph S., Lu F., Nusskern D.R.,  
RA Shue B.C., Zheng X.H., Zhong F., Delcher A.L., Huson D.H.,  
RA Kravitz S.A., Mouchard L., Reinert K., Remington K.A., Clark A.G.,  
RA Waterman M.S., Eichler E.E., Adams M.D., Hunkapiller M.W., Myers E.W.,  
RA Venter J.C.;  
RL Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.  
RN [6]  
RP NUCLEOTIDE SEQUENCE [LARGE SCALE mRNA].  
RC TISSUE=Placenta;  
RX PubMed=15489334; DOI=10.1101/gr.2596504;  
RG The MGC Project Team;  
RT "The status, quality, and expansion of the NIH full-length cDNA  
RT project: the Mammalian Gene Collection (MGC)." ;  
RL Genome Res. 14:2121-2127(2004).  
RN [7]  
RP PROTEIN SEQUENCE OF 1-14, ACETYLATION AT MET-1, AND MASS SPECTROMETRY.  
RC TISSUE=Colon carcinoma;  
RA Bienvenut W.V., Zebisch A., Kolch W.;  
RL Submitted (DEC-2008) to UniProtKB.  
RN [8]  
RP PHOSPHORYLATION [LARGE SCALE ANALYSIS] AT SER-161, AND MASS  
RP SPECTROMETRY.  
RC TISSUE=Embryonic kidney;  
RX PubMed=17525332; DOI=10.1126/science.1140321;  
RA Matsuoka S., Ballif B.A., Smogorzewska A., McDonald E.R. III,  
RA Hurov K.E., Luo J., Bakalarski C.E., Zhao Z., Solimini N.,  
RA Lerenthal Y., Shiloh Y., Gygi S.P., Elledge S.J.;  
RT "ATM and ATR substrate analysis reveals extensive protein networks  
RT responsive to DNA damage.";  
RL Science 316:1160-1166(2007).  
RN [9]  
RP IDENTIFICATION BY MASS SPECTROMETRY [LARGE SCALE ANALYSIS].  
RA Colinge J., Superti-Furga G., Bennett K.L.;  
RL Submitted (OCT-2008) to UniProtKB.  
RN [10]  
RP ACETYLATION [LARGE SCALE ANALYSIS] AT MET-1, AND MASS SPECTROMETRY.  
RC TISSUE=Embryonic kidney;  
RX PubMed=19413330; DOI=10.1021/ac9004309;  
RA Gauci S., Helbig A.O., Slijper M., Krijgsveld J., Heck A.J.,  
RA Mohammed S.;  
RT "Lys-N and trypsin cover complementary parts of the phosphoproteome in  
RT a refined SCX-based approach.";  
RL Anal. Chem. 81:4493-4501(2009).  
RN [11]  
RP STRUCTURE BY NMR.  
RA Yu W., Jin C., Xia B.;  
RT "The NMR structure of human zeta-COP.";

RL Submitted (JUN-2007) to the PDB data bank.  
 CC -!- FUNCTION: The coatomer is a cytosolic protein complex that binds  
 CC to dilysine motifs and reversibly associates with Golgi non-  
 CC clathrin-coated vesicles, which further mediate biosynthetic  
 CC protein transport from the ER, via the Golgi up to the trans Golgi  
 CC network. Coatomer complex is required for budding from Golgi  
 CC membranes, and is essential for the retrograde Golgi-to-ER  
 CC transport of dilysine-tagged proteins. In mammals, the coatomer  
 CC can only be recruited by membranes associated to ADP-ribosylation  
 CC factors (ARFs), which are small GTP-binding proteins; the complex  
 CC also influences the Golgi structural integrity, as well as the  
 CC processing, activity, and endocytic recycling of LDL receptors (By  
 CC similarity).  
 CC -!- FUNCTION: The zeta subunit may be involved in regulating the coat  
 CC assembly and, hence, the rate of biosynthetic protein transport  
 CC due to its association-dissociation properties with the coatomer  
 CC complex.  
 CC -!- SUBUNIT: Oligomeric complex that consists of at least the alpha,  
 CC beta, beta', gamma, delta, epsilon and zeta subunits.  
 CC -!- SUBCELLULAR LOCATION: Cytoplasm (By similarity). Golgi apparatus  
 CC membrane; Peripheral membrane protein; Cytoplasmic side (By  
 CC similarity). Cytoplasmic vesicle, COPI-coated vesicle membrane;  
 CC Peripheral membrane protein; Cytoplasmic side (By similarity).  
 CC Note=The coatomer is cytoplasmic or polymerized on the cytoplasmic  
 CC side of the Golgi, as well as on the vesicles/buds originating  
 CC from it (By similarity).  
 CC -!- PTM: Phosphorylated upon DNA damage, probably by ATM or ATR.  
 CC -!- SIMILARITY: Belongs to the adaptor complexes small subunit family.

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DR EMBL; AB047848; BAB17659.1; -; mRNA.  
 DR EMBL; AF151878; AAD34115.1; -; mRNA.  
 DR EMBL; AF161529; AAF29144.1; -; mRNA.  
 DR EMBL; AF086911; AAP97141.1; -; mRNA.  
 DR EMBL; CH471054; EAW96774.1; -; Genomic\_DNA.  
 DR EMBL; BC002849; AAH02849.1; -; mRNA.  
 DR IPI; IPI00032851; -.  
 DR RefSeq; NP\_057141.1; -.  
 DR UniGene; Hs.505652; -.  
 DR PDB; 2HF6; NMR; -; A=1-149.  
 DR PDBsum; 2HF6; -.  
 DR ProteinModelPortal; P61923; -.  
 DR DIP; DIP-29873N; -.  
 DR IntAct; P61923; 3.  
 DR STRING; P61923; -.  
 DR PhosphoSite; P61923; -.  
 DR PRIDE; P61923; -.  
 DR Ensembl; ENST00000262061; ENSP00000262061; ENSG00000111481.  
 DR GeneID; 22818; -.  
 DR KEGG; hsa:22818; -.  
 DR UCSC; uc001sf1; human.  
 DR CTD; 22818; -.  
 DR GeneCards; GC12P054718; -.  
 DR H-InvDB; HIX0010694; -.  
 DR HGNC; HGNC:2243; COPZ1.  
 DR PharmGKB; PA26760; -.  
 DR eggNOG; prNOG08087; -.  
 DR HOGENOM; HBG326766; -.  
 DR HOVERGEN; HBG051077; -.  
 DR InParanoid; P61923; -.  
 DR OMA; YDDTYPT; -.  
 DR PhylomeDB; P61923; -.  
 DR Reactome; REACT\_11123; Membrane Trafficking.  
 DR NextBio; 43208; -.  
 DR ArrayExpress; P61923; -.

DR Bgee; P61923; -.  
 DR CleanEx; HS\_COPZ1; -.  
 DR Genevestigator; P61923; -.  
 DR GermOnline; ENSG00000111481; Homo sapiens.  
 DR GO; GO:0030126; C:COPI vesicle coat; IDA:UniProtKB.  
 DR GO; GO:0005829; C:cytosol; EXP:Reactome.  
 DR GO; GO:0005515; F:protein binding; IEA:InterPro.  
 DR GO; GO:0048205; P:COPI coating of Golgi vesicle; EXP:Reactome.  
 DR GO; GO:0006891; P:intra-Golgi vesicle-mediated transport; IDA:UniProtKB.  
 DR GO; GO:0006886; P:intracellular protein transport; IEA:InterPro.  
 DR GO; GO:0006890; P:retrograde vesicle-mediated transport, Golgi . . . ; TAS:UniProtKB.  
 DR InterPro; IPR022775; AP\_mu\_sigma\_su.  
 DR InterPro; IPR000804; Clathrin\_sm-chain\_CS.  
 DR InterPro; IPR011012; Longin-like.  
 DR Pfam; PF01217; Clat\_adaptor\_s; 1.  
 DR SUPFAM; SSF64356; Longin\_like; 1.  
 DR PROSITE; PS00989; CLAT\_ADAPTER\_S; 1.  
 PE 1: Evidence at protein level;  
 KW 3D-structure; Acetylation; Complete proteome; Cytoplasm;  
 KW Cytoplasmic vesicle; Direct protein sequencing; ER-Golgi transport;  
 KW Golgi apparatus; Membrane; Phosphoprotein; Protein transport;  
 KW Transport.  
 FT CHAIN 1 177 Coatomer subunit zeta-1.  
 FT /FTId=PRO\_0000193825.  
 FT MOD\_RES 1 1 N-acetylmethionine.  
 FT MOD\_RES 161 161 Phosphoserine.  
 FT STRAND 14 20  
 FT STRAND 25 30  
 FT HELIX 38 52  
 FT STRAND 59 62  
 FT STRAND 65 72  
 FT STRAND 75 81  
 FT HELIX 88 105  
 FT HELIX 111 115  
 FT HELIX 118 128  
 FT HELIX 139 148

Query Match 100.0%; Score 882; DB 1; Length 177;  
 Best Local Similarity 100.0%;  
 Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MEALILEEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFENKNIFNKTHRTDSEIA 60  
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 Db 1 MEALILEEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFENKNIFNKTHRTDSEIA 60  
  
 Qy 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKVNVEKRALLEMEG 120  
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 Db 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKVNVEKRALLEMEG 120  
  
 Qy 121 LFLAVDEIVDGGVILESDPQQVVHVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177  
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 Db 121 LFLAVDEIVDGGVILESDPQQVVHVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177

RESULT 2  
 COPZ1\_MOUSE  
 ID COPZ1\_MOUSE Reviewed; 177 AA.  
 AC P61924; Q9Y3C3;  
 DT 07-JUN-2004, integrated into UniProtKB/Swiss-Prot.  
 DT 07-JUN-2004, sequence version 1.  
 DT 05-OCT-2010, entry version 58.  
 DE RecName: Full=Coatomer subunit zeta-1;  
 DE AltName: Full=Zeta-1-coat protein;  
 DE Short=Zeta-1 COP;  
 GN Name=Copz1; Synonyms=Copz;  
 OS Mus musculus (Mouse).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;  
 OC Muroidea; Muridae; Murinae; Mus; Mus.  
 OX NCBI\_TaxID=10090;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE [mRNA].  
 RA Hahn Y., Chung J.H.;  
 RT "Murine Copz1 gene encoding nonclathrin coat protein zeta-COP.";  
 RL Submitted (JAN-2000) to the EMBL/GenBank/DDBJ databases.  
 RN [2]  
 RP NUCLEOTIDE SEQUENCE [LARGE SCALE mRNA].  
 RC STRAIN=C57BL/6J;  
 RX PubMed=16141072; DOI=10.1126/science.1112014;  
 RA Carninci P., Kasukawa T., Katayama S., Gough J., Frith M.C., Maeda N.,  
 RA Oyama R., Ravasi T., Lenhard B., Wells C., Kodzius R., Shimokawa K.,  
 RA Bajic V.B., Brenner S.E., Batalov S., Forrest A.R., Zavolan M.,  
 RA Davis M.J., Wilming L.G., Aidinis V., Allen J.E.,  
 RA Ambesi-Impiombato A., Apweiler R., Aturaliya R.N., Bailey T.L.,  
 RA Bansal M., Baxter L., Beisel K.W., Bersano T., Bono H., Chalk A.M.,  
 RA Chiu K.P., Choudhary V., Christoffels A., Clutterbuck D.R.,  
 RA Crowe M.L., Dalla E., Dalrymple B.P., de Bono B., Della Gatta G.,  
 RA di Bernardo D., Down T., Engstrom P., Fagiolini M., Faulkner G.,  
 RA Fletcher C.F., Fukushima T., Furuno M., Futaki S., Gariboldi M.,  
 RA Georgii-Hemming P., Gingeras T.R., Gojobori T., Green R.E.,  
 RA Gustincich S., Harbers M., Hayashi Y., Hensch T.K., Hirokawa N.,  
 RA Hill D., Huminiecki L., Iacono M., Ikeo K., Iwama A., Ishikawa T.,  
 RA Jakt M., Kanapin A., Katoh M., Kawasawa Y., Kelso J., Kitamura H.,  
 RA Kitano H., Kollrias G., Krishnan S.P., Kruger A., Kummerfeld S.K.,  
 RA Kurochkin I.V., Lareau L.F., Lazarevic D., Lipovich L., Liu J.,  
 RA Liuni S., McWilliam S., Madan Babu M., Madera M., Marchionni L.,  
 RA Matsuda H., Matsuzawa S., Miki H., Mignone F., Miyake S., Morris K.,  
 RA Mottagui-Tabar S., Mulder N., Nakano N., Nakauchi H., Ng P.,  
 RA Nilsson R., Nishiguchi S., Nishikawa S., Nori F., Ohara O.,  
 RA Okazaki Y., Orlando V., Pang K.C., Pavan W.J., Pavesi G., Pesole G.,  
 RA Petrovsky N., Piazza S., Reed J., Reid J.F., Ring B.Z., Ringwald M.,  
 RA Rost B., Ruan Y., Salzberg S.L., Sandelin A., Schneider C.,  
 RA Schoenbach C., Sekiguchi K., Semple C.A., Seno S., Sessa L., Sheng Y.,  
 RA Shibata Y., Shimada H., Shimada K., Silva D., Sinclair B.,  
 RA Sperling S., Stupka E., Sugiura K., Sultana R., Takenaka Y., Taki K.,  
 RA Tammoja K., Tan S.L., Tang S., Taylor M.S., Tegner J., Teichmann S.A.,  
 RA Ueda H.R., van Nimwegen E., Verardo R., Wei C.L., Yagi K.,  
 RA Yamanishi H., Zabavsky E., Zhu S., Zimmer A., Hide W., Bult C.,  
 RA Grimmond S.M., Teasdale R.D., Liu E.T., Brusic V., Quackenbush J.,  
 RA Wahlestedt C., Mattick J.S., Hume D.A., Kai C., Sasaki D., Tomaru Y.,  
 RA Fukuda S., Kanamori-Katayama M., Suzuki M., Aoki J., Arakawa T.,  
 RA Iida J., Imamura K., Itoh M., Kato T., Kawaji H., Kawagashira N.,  
 RA Kawashima T., Kojima M., Kondo S., Konno H., Nakano K., Ninomiya N.,  
 RA Nishio T., Okada M., Plessy C., Shibata K., Shiraki T., Suzuki S.,  
 RA Tagami M., Waki K., Watahiki A., Okamura-Oho Y., Suzuki H., Kawai J.,  
 RA Hayashizaki Y.;  
 RT "The transcriptional landscape of the mammalian genome.";  
 RL Science 309:1559-1563(2005).  
 RN [3]  
 RP NUCLEOTIDE SEQUENCE [LARGE SCALE mRNA].  
 RC STRAIN=C57BL/6, and C57BL/6J; TISSUE=Brain, and Embryo;  
 RX PubMed=15489334; DOI=10.1101/gr.2596504;  
 RG The MGC Project Team;  
 RT "The status, quality, and expansion of the NIH full-length cDNA  
 project: the Mammalian Gene Collection (MGC)." ;  
 RL Genome Res. 14:2121-2127(2004).  
 CC -!- FUNCTION: The coatomer is a cytosolic protein complex that binds  
 CC to dityrosine motifs and reversibly associates with Golgi non-  
 CC clathrin-coated vesicles, which further mediate biosynthetic  
 CC protein transport from the ER, via the Golgi up to the trans Golgi  
 CC network. Coatomer complex is required for budding from Golgi  
 CC membranes, and is essential for the retrograde Golgi-to-ER  
 CC transport of dityrosine-tagged proteins. In mammals, the coatomer  
 CC can only be recruited by membranes associated to ADP-ribosylation

CC factors (ARFs), which are small GTP-binding proteins; the complex  
 CC also influences the Golgi structural integrity, as well as the  
 CC processing, activity, and endocytic recycling of LDL receptors (By  
 CC similarity).  
 CC -!- FUNCTION: The zeta subunit may be involved in regulating the coat  
 CC assembly and, hence, the rate of biosynthetic protein transport  
 CC due to its association-dissociation properties with the coatomer  
 CC complex (By similarity).  
 CC -!- SUBUNIT: Oligomeric complex that consists of at least the alpha,  
 CC beta, beta', gamma, delta, epsilon and zeta subunits (By  
 CC similarity).  
 CC -!- SUBCELLULAR LOCATION: Cytoplasm (By similarity). Golgi apparatus  
 CC membrane; Peripheral membrane protein; Cytoplasmic side (By  
 CC similarity). Cytoplasmic vesicle, COPI-coated vesicle membrane;  
 CC Peripheral membrane protein; Cytoplasmic side (By similarity).  
 CC Note=The coatomer is cytoplasmic or polymerized on the cytoplasmic  
 CC side of the Golgi, as well as on the vesicles/buds originating  
 CC from it (By similarity).  
 CC -!- PTM: Phosphorylated upon DNA damage, probably by ATM or ATR (By  
 CC similarity).  
 CC -!- SIMILARITY: Belongs to the adaptor complexes small subunit family.  
 CC -----  
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 CC -----

DR EMBL; AB037370; BAA90303.1; -; mRNA.  
 DR EMBL; AK003302; BAB22703.1; -; mRNA.  
 DR EMBL; BC002246; -; NOT\_ANNOTATED\_CDS; mRNA.  
 DR EMBL; BC058524; AAH58524.1; -; mRNA.  
 DR EMBL; BC085314; AAH85314.1; -; mRNA.  
 DR IPI; IPI00139637; -.  
 DR RefSeq; NP\_062791.1; -.  
 DR UniGene; Mm.29473; -.  
 DR ProteinModelPortal; P61924; -.  
 DR SMR; P61924; 1-149.  
 DR STRING; P61924; -.  
 DR PhosphoSite; P61924; -.  
 DR PRIDE; P61924; -.  
 DR Ensembl; ENSMUST00000100162; ENSMUSP00000097738; ENSMUSG00000060992.  
 DR GeneID; 56447; -.  
 DR KEGG; mmu:56447; -.  
 DR UCSC; uc007xxv.1; mouse.  
 DR CTD; 56447; -.  
 DR MGI; MGI:1929063; Copz1.  
 DR eggNOG; roNOG15155; -.  
 DR HOGENOM; HBG326766; -.  
 DR HOVERGEN; HBG051077; -.  
 DR InParanoid; P61924; -.  
 DR OMA; YDDTYPT; -.  
 DR PhylomeDB; P61924; -.  
 DR NextBio; 312654; -.  
 DR ArrayExpress; P61924; -.  
 DR Bgee; P61924; -.  
 DR CleanEx; MM\_COPZ1; -.  
 DR Genevestigator; P61924; -.  
 DR GermOnline; ENSMUSG00000060992; Mus musculus.  
 DR GO; GO:0030126; C:COPI vesicle coat; ISS:UniProtKB.  
 DR GO; GO:0005515; F:protein binding; IEA:InterPro.  
 DR GO; GO:0006891; P:intra-Golgi vesicle-mediated transport; ISS:UniProtKB.  
 DR GO; GO:0006886; P:intracellular protein transport; IEA:InterPro.  
 DR InterPro; IPR022775; AP\_mu\_sigma\_su.  
 DR InterPro; IPR000804; Clathrin\_sm-chain\_CS.  
 DR InterPro; IPR011012; Longin-like.  
 DR Pfam; PF01217; Clat\_adaptor\_s; 1.  
 DR SUPFAM; SSF64356; Longin\_like; 1.  
 DR PROSITE; PS00989; CLAT\_ADAPTER\_S; 1.  
 PE 2: Evidence at transcript level;

KW Acetylation; Cytoplasm; Cytoplasmic vesicle; ER-Golgi transport;  
 KW Golgi apparatus; Membrane; Phosphoprotein; Protein transport;  
 KW Transport.  
 FT CHAIN 1 177 Coatomer subunit zeta-1.  
 FT /FTId=PRO\_0000193826.  
 FT MOD\_RES 1 1 N-acetylmethionine (By similarity).  
 FT MOD\_RES 161 161 Phosphoserine (By similarity).  
 SQ SEQUENCE 177 AA; 20198 MW; 355530D032D3A049 CRC64;

Query Match 100.0%; Score 882; DB 1; Length 177;  
 Best Local Similarity 100.0%;  
 Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFKNIFNKTHRTDSEIA 60  
 |||||||  
 Db 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFKNIFNKTHRTDSEIA 60  
 |||||||  
 Qy 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLEMEG 120  
 |||||||  
 Db 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLEMEG 120  
 |||||||  
 Qy 121 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177  
 |||||||  
 Db 121 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177

## RESULT 3

COPZ1\_PONAB

ID COPZ1\_PONAB Reviewed; 177 AA.  
 AC Q5R5F2;  
 DT 13-SEP-2005, integrated into UniProtKB/Swiss-Prot.  
 DT 21-DEC-2004, sequence version 1.  
 DT 05-OCT-2010, entry version 37.  
 DE RecName: Full=Coatomer subunit zeta-1;  
 DE AltName: Full=Zeta-1-coat protein;  
 DE Short=Zeta-1 COP;  
 GN Name=COPZ1; Synonyms=COPZ;  
 OS Pongo abelii (Sumatran orangutan).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Euarchontoglires; Primates; Haplorrhini;  
 OC Catarrhini; Hominidae; Pongo.  
 OX NCBI\_TaxID=9601;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE [LARGE SCALE RNA].  
 RC TISSUE=Kidney;  
 RG The German cDNA consortium;  
 RL Submitted (NOV-2004) to the EMBL/GenBank/DDBJ databases.  
 CC -!- FUNCTION: The coatomer is a cytosolic protein complex that binds to dlysine motifs and reversibly associates with Golgi non-clathrin-coated vesicles, which further mediate biosynthetic protein transport from the ER, via the Golgi up to the trans Golgi network. Coatomer complex is required for budding from Golgi membranes, and is essential for the retrograde Golgi-to-ER transport of dlysine-tagged proteins. In mammals, the coatomer can only be recruited by membranes associated to ADP-ribosylation factors (ARFs), which are small GTP-binding proteins; the complex also influences the Golgi structural integrity, as well as the processing, activity, and endocytic recycling of LDL receptors (By similarity).  
 CC -!- FUNCTION: The zeta subunit may be involved in regulating the coat assembly and, hence, the rate of biosynthetic protein transport due to its association-dissociation properties with the coatomer complex (By similarity).  
 CC -!- SUBUNIT: Oligomeric complex that consists of at least the alpha, beta, beta', gamma, delta, epsilon and zeta subunits (By similarity).  
 CC -!- SUBCELLULAR LOCATION: Cytoplasm (By similarity). Golgi apparatus

CC membrane; Peripheral membrane protein; Cytoplasmic side (By similarity). Cytoplasmic vesicle, COPI-coated vesicle membrane; Peripheral membrane protein; Cytoplasmic side (By similarity). Note=The coatomer is cytoplasmic or polymerized on the cytoplasmic side of the Golgi, as well as on the vesicles/buds originating from it (By similarity).

CC -!- PTM: Phosphorylated upon DNA damage, probably by ATM or ATR (By similarity).

CC -!- SIMILARITY: Belongs to the adaptor complexes small subunit family.

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DR EMBL; CR860909; CAH93014.1; -; mRNA.

DR RefSeq; NP\_001127620.1; -.

DR UniGene; Pab.18608; -.

DR ProteinModelPortal; Q5R5F2; -.

DR SMR; Q5R5F2; 1-149.

DR GeneID; 100174699; -.

DR CTD; 100174699; -.

DR HOVERGEN; HBG051077; -.

DR InParanoid; Q5R5F2; -.

DR OMA; YDDTYPT; -.

DR OrthoDB; EOG969TD6; -.

DR GO; GO:0030126; C:COPI vesicle coat; ISS:UniProtKB.

DR GO; GO:0005515; F:protein binding; IEA:InterPro.

DR GO; GO:0006891; P:intra-Golgi vesicle-mediated transport; ISS:UniProtKB.

DR GO; GO:0006886; P:intracellular protein transport; IEA:InterPro.

DR InterPro; IPR022775; AP\_mu\_sigma\_su.

DR InterPro; IPR000804; Clathrin\_sm-chain\_CS.

DR InterPro; IPR011012; Longin-like.

DR Pfam; PF01217; Clat\_adaptor\_s; 1.

DR SUPFAM; SSF64356; Longin\_like; 1.

DR PROSITE; PS00989; CLAT\_ADAPTER\_S; 1.

PE 2: Evidence at transcript level;

KW Acetylation; Cytoplasm; Cytoplasmic vesicle; ER-Golgi transport;

KW Golgi apparatus; Membrane; Phosphoprotein; Protein transport;

KW Transport.

FT CHAIN 1 177 Coatomer subunit zeta-1.  
FT /FTId=PRO\_0000193827.

FT MOD\_RES 1 1 N-acetylmethionine (By similarity).

FT MOD\_RES 161 161 Phosphoserine (By similarity).

SQ SEQUENCE 177 AA; 20198 MW; 355530D032D3A049 CRC64;

Query Match 100.0%; Score 882; DB 1; Length 177;  
Best Local Similarity 100.0%;  
Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFENKNIFNKTHRTDSEIA 60  
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||  
Db 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFENKNIFNKTHRTDSEIA 60

Qy 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKVNVEKRALLEMEG 120  
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||  
Db 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKVNVEKRALLEMEG 120

Qy 121 LFLAVDEIVDGIVILESDPQQVVHRVALRGEDVPLTEQTVSQVLQSAEQIKWSLLR 177  
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||  
Db 121 LFLAVDEIVDGIVILESDPQQVVHRVALRGEDVPLTEQTVSQVLQSAEQIKWSLLR 177

RESULT 4  
D4A8T3\_RAT  
ID D4A8T3\_RAT Unreviewed; 177 AA.  
AC D4A8T3;  
DT 20-APR-2010, integrated into UniProtKB/TrEMBL.  
DT 20-APR-2010, sequence version 1.

DT 02-NOV-2010, entry version 7.  
 DE SubName: Full=Coatomer protein complex, subunit zeta 1 (Predicted);  
 DE SubName: Full=Uncharacterized protein;  
 GN Name=Copz1; Synonyms=Copz1\_predicted; ORFNames=rCG\_50578;  
 OS Rattus norvegicus (Rat).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;  
 OC Muroidea; Muridae; Murinae; Rattus.  
 OX NCBI\_TaxID=10116;  
 RN [1]  
 RP IDENTIFICATION.  
 RG Ensembl;  
 RL Submitted (MAR-2010) to UniProtKB.  
 RN [2]  
 RP NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].  
 RC STRAIN=Brown Norway;  
 RX PubMed=15057822; DOI=10.1038/nature02426;  
 RA Gibbs R.A., Weinstock G.M., Metzker M.L., Muzny D.M., Sodergren E.J.,  
 RA Scherer S., Scott G., Steffen D., Worley K.C., Burch P.E., Okwuonu G.,  
 RA Hines S., Lewis L., Deramo C., Delgado O., Dugan-Rocha S., Miner G.,  
 RA Morgan M., Hawes A., Gill R., Holt R.A., Adams M.D., Amanatides P.G.,  
 RA Baden-Tillson H., Barnstead M., Chin S., Evans C.A., Ferriera S.,  
 RA Fosler C., Glodek A., Gu Z., Jennings D., Kraft C.L., Nguyen T.,  
 RA Pfannkoch C.M., Sitter C., Sutton G.G., Venter J.C., Woodage T.,  
 RA Smith D., Lee H.-M., Gustafson E., Cahill P., Kana A.,  
 RA Doucette-Stamm L., Weinstock K., Fechtel K., Weiss R.B., Dunn D.M.,  
 RA Green E.D., Blakesley R.W., Bouffard G.G., De Jong P.J., Osoegawa K.,  
 RA Zhu B., Marra M., Schein J., Bosdet I., Fjell C., Jones S.,  
 RA Krzywinski M., Mathewson C., Siddiqui A., Wye N., McPherson J.,  
 RA Zhao S., Fraser C.M., Shetty J., Shatsman S., Geer K., Chen Y.,  
 RA Abramzon S., Nierman W.C., Havlak P.H., Chen R., Durbin K.J., Egan A.,  
 RA Ren Y., Song X.-Z., Li B., Liu Y., Qin X., Cawley S., Cooney A.J.,  
 RA D'Souza L.M., Martin K., Wu J.Q., Gonzalez-Garay M.L., Jackson A.R.,  
 RA Kalafus K.J., McLeod M.P., Milosavljevic A., Virk D., Volkov A.,  
 RA Wheeler D.A., Zhang Z., Bailey J.A., Eichler E.E., Tuzun E.,  
 RA Birney E., Mongin E., Ureta-Vidal A., Woodward C., Zdobnov E.,  
 RA Bork P., Suyama M., Torrents D., Andersson M., Trask B.J.,  
 RA Young J.M., Huang H., Wang H., Xing H., Daniels S., Gietzen D.,  
 RA Schmidt J., Stevens K., Vitt U., Wingrove J., Camara F., Mar Alba M.,  
 RA Abril J.F., Guigo R., Smit A., Dubchak I., Rubin E.M., Couronne O.,  
 RA Poliakov A., Huebner N., Ganten D., Goesele C., Hummel O.,  
 RA Kreitler T., Lee Y.-A., Monti J., Schulz H., Zimdahl H.,  
 RA Himmelbauer H., Lehrach H., Jacob H.J., Bromberg S.,  
 RA Gullings-Handley J., Jensen-Seaman M.I., Kwitek A.E., Lazar J.,  
 RA Pasko D., Tonellato P.J., Twigger S., Ponting C.P., Duarte J.M.,  
 RA Rice S., Goodstadt L., Beatson S.A., Emes R.D., Winter E.E.,  
 RA Webber C., Brandt P., Nyakatura G., Adetobi M., Chiaromonte F.,  
 RA Elnitski L., Eswara P., Hardison R.C., Hou M., Kolbe D., Makova K.,  
 RA Miller W., Nekrutenko A., Riemer C., Schwartz S., Taylor J., Yang S.,  
 RA Zhang Y., Lindpaintner K., Andrews T.D., Caccamo M., Clamp M.,  
 RA Clarke L., Curwen V., Durbin R.M., Eyras E., Searle S.M., Cooper G.M.,  
 RA Batzoglou S., Brudno M., Sidow A., Stone E.A., Payseur B.A.,  
 RA Bourque G., Lopez-Otin C., Puente X.S., Chakrabarti K., Chatterji S.,  
 RA Dewey C., Pachter L., Bray N., Yap V.B., Caspi A., Tesler G.,  
 RA Pevzner P.A., Haussler D., Roskin K.M., Baertsch R., Clawson H.,  
 RA Furey T.S., Hinrichs A.S., Karolchik D., Kent W.J., Rosenbloom K.R.,  
 RA Trumbower H., Weirauch M., Cooper D.N., Stenson P.D., Ma B., Brent M.,  
 RA Arumugam M., Shteynberg D., Copley R.R., Taylor M.S., Riethman H.,  
 RA Mudunuri U., Peterson J., Guyer M., Felsenfeld A., Old S., Mockrin S.,  
 RA Collins F.S.;  
 RT "Genome sequence of the Brown Norway rat yields insights into  
 mammalian evolution.";  
 RL Nature 428:493-521(2004).  
 RN [3]  
 RP NUCLEOTIDE SEQUENCE.  
 RC STRAIN=BN;  
 RX PubMed=15632090; DOI=10.1101/gr.2889405;

RA Florea L., Di Francesco V., Miller J., Turner R., Yao A., Harris M.,  
 RA Walenz B., Mobarry C., Merkulov G.V., Charlab R., Dew I., Deng Z.,  
 RA Istrail S., Li P., Sutton G.;  
 RT "Gene and alternative splicing annotation with AIR.";  
 RL Genome Res. 15:54-66(2005).  
 RN [4]  
 RP NUCLEOTIDE SEQUENCE.  
 RC STRAIN=BN;  
 RA Mural R.J., Li P.W., Adams M.D., Amanatides P.G., Baden-Tillson H.,  
 RA Barnstead M., Chin S.H., Dew I., Evans C.A., Ferriera S., Flanigan M.,  
 RA Fosler C., Glodek A., Gu Z., Holt R.A., Jennings D., Kraft C.L.,  
 RA Lu F., Nguyen T., Nusskern D.R., Pfannkoch C.M., Sitter C.,  
 RA Sutton G.G., Venter J.C., Wang Z., Woodage T., Zheng X.H., Zhong F.;  
 RL Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.  
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 CC -----  
 DR EMBL; CH474035; EDL86787.1; -; Genomic\_DNA.  
 DR IPI; IPI00949165; -.  
 DR RefSeq; NP\_001101587.1; -.  
 DR UniGene; Rn.159796; -.  
 DR ProteinModelPortal; D4A8T3; -.  
 DR SMR; D4A8T3; 1-149.  
 DR Ensembl; ENSRNOT00000065270; ENSRNOP00000059082; ENSRNOG00000036835.  
 DR GeneID; 315345; -.  
 DR KEGG; rno:315345; -.  
 DR CTD; 315345; -.  
 DR RGD; 1306154; Copz1.  
 DR GO; GO:0030117; C:membrane coat; IEA:InterPro.  
 DR GO; GO:0005515; F:protein binding; IEA:InterPro.  
 DR GO; GO:0006886; P:intracellular protein transport; IEA:InterPro.  
 DR GO; GO:0016192; P:vesicle-mediated transport; IEA:InterPro.  
 DR InterPro; IPR022775; AP\_mu\_sigma\_su.  
 DR InterPro; IPR000804; Clathrin\_sm-chain\_CS.  
 DR InterPro; IPR011012; Longin-like.  
 DR Pfam; PF01217; Clat\_adaptor\_s; 1.  
 DR SUPFAM; SSF64356; Longin\_like; 1.  
 DR PROSITE; PS00989; CLAT\_ADAPTER\_S; 1.  
 PE 4: Predicted;  
 SQ SEQUENCE 177 AA; 20198 MW; 355530D032D3A049 CRC64;

Query Match 100.0%; Score 882; DB 2; Length 177;  
 Best Local Similarity 100.0%;  
 Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy	1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60
Db	1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60
Qy	61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKVNVEKRALLEMEG 120
Db	61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKVNVEKRALLEMEG 120
Qy	121 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177
Db	121 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177

## RESULT 5

Q542M2\_MOUSE  
 ID Q542M2\_MOUSE Unreviewed; 177 AA.  
 AC Q542M2;  
 DT 24-MAY-2005, integrated into UniProtKB/TrEMBL.  
 DT 24-MAY-2005, sequence version 1.  
 DT 05-OCT-2010, entry version 50.  
 DE SubName: Full=Coatomer protein complex, subunit zeta 1, isoform CRA\_c;

DE SubName: Full=Copz1 protein;  
 DE SubName: Full=Putative uncharacterized protein;  
 GN Name=Copz1; ORFNames=mCG\_15682;  
 OS Mus musculus (Mouse).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;  
 OC Muroidea; Muridae; Murinae; Mus; Mus.  
 OX NCBI\_TaxID=10090;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].  
 RC STRAIN=C57BL/6J, and NOD; TISSUE=Spinal ganglion, Amnion, Placenta,  
 RC and Activated spleen;  
 RX PubMed=16141072; DOI=10.1126/science.1112014;  
 RA Carninci P., Kasukawa T., Katayama S., Gough J., Frith M.C., Maeda N.,  
 RA Oyama R., Ravasi T., Lenhard B., Wells C., Kodzius R., Shimokawa K.,  
 RA Bajic V.B., Brenner S.E., Batalov S., Forrest A.R., Zavolan M.,  
 RA Davis M.J., Wilming L.G., Aidinis V., Allen J.E.,  
 RA Ambesi-Impiombato A., Apweiler R., Aturaliya R.N., Bailey T.L.,  
 RA Bansal M., Baxter L., Beisel K.W., Bersano T., Bono H., Chalk A.M.,  
 RA Chiu K.P., Choudhary V., Christoffels A., Clutterbuck D.R.,  
 RA Crowe M.L., Dalla E., Dalrymple B.P., de Bono B., Della Gatta G.,  
 RA di Bernardo D., Down T., Engstrom P., Fagiolini M., Faulkner G.,  
 RA Fletcher C.F., Fukushima T., Furuno M., Futaki S., Gariboldi M.,  
 RA Georgii-Hemming P., Gingeras T.R., Gojobori T., Green R.E.,  
 RA Gustincich S., Harbers M., Hayashi Y., Hensch T.K., Hirokawa N.,  
 RA Hill D., Huminiecki L., Iacono M., Ikeo K., Iwama A., Ishikawa T.,  
 RA Jakt M., Kanapin A., Katoh M., Kawasawa Y., Kelso J., Kitamura H.,  
 RA Kitano H., Kollias G., Krishnan S.P., Kruger A., Kummerfeld S.K.,  
 RA Kurochkin I.V., Lareau L.F., Lazarevic D., Lipovich L., Liu J.,  
 RA Liuni S., McWilliam S., Madan Babu M., Madera M., Marchionni L.,  
 RA Matsuda H., Matsuzawa S., Miki H., Mignone F., Miyake S., Morris K.,  
 RA Mottagui-Tabar S., Mulder N., Nakano N., Nakauchi H., Ng P.,  
 RA Nilsson R., Nishiguchi S., Nishikawa S., Nori F., Ohara O.,  
 RA Okazaki Y., Orlando V., Pang K.C., Pavan W.J., Pavesi G., Pesole G.,  
 RA Petrovsky N., Piazza S., Reed J., Reid J.F., Ring B.Z., Ringwald M.,  
 RA Rost B., Ruan Y., Salzberg S.L., Sandelin A., Schneider C.,  
 RA Schoenbach C., Sekiguchi K., Semple C.A., Seno S., Sessa L., Sheng Y.,  
 RA Shibata Y., Shimada H., Shimada K., Silva D., Sinclair B.,  
 RA Sperling S., Stupka E., Sugiura K., Sultana R., Takenaka Y., Taki K.,  
 RA Tammoja K., Tan S.L., Tang S., Taylor M.S., Tegner J., Teichmann S.A.,  
 RA Ueda H.R., van Nimwegen E., Verardo R., Wei C.L., Yagi K.,  
 RA Yamanishi H., Zabarovsky E., Zhu S., Zimmer A., Hide W., Bult C.,  
 RA Grimmond S.M., Teasdale R.D., Liu E.T., Brusic V., Quackenbush J.,  
 RA Wahlestedt C., Mattick J.S., Hume D.A., Kai C., Sasaki D., Tomaru Y.,  
 RA Fukuda S., Kanamori-Katayama M., Suzuki M., Aoki J., Arakawa T.,  
 RA Iida J., Imamura K., Itoh M., Kato T., Kawaji H., Kawagashira N.,  
 RA Kawashima T., Kojima M., Kondo S., Konno H., Nakano K., Ninomiya N.,  
 RA Nishio T., Okada M., Plessy C., Shibata K., Shiraki T., Suzuki S.,  
 RA Tagami M., Waki K., Watahiki A., Okamura-Oho Y., Suzuki H., Kawai J.,  
 RA Hayashizaki Y.;  
 RT "The transcriptional landscape of the mammalian genome.";  
 RL Science 309:1559-1563(2005).  
 RN [2]  
 RP NUCLEOTIDE SEQUENCE.  
 RC STRAIN=Mixed;  
 RX MEDLINE=22036378; PubMed=12040188; DOI=10.1126/science.1069193;  
 RA Mural R.J., Adams M.D., Myers E.W., Smith H.O., Miklos G.L., Wides R.,  
 RA Halpern A., Li P.W., Sutton G.G., Nadeau J., Salzberg S.L., Holt R.A.,  
 RA Kodira C.D., Lu F., Chen L., Deng Z., Evangelista C.C., Gan W.,  
 RA Heiman T.J., Li J., Li Z., Merkulov G.V., Milshina N.V., Naik A.K.,  
 RA Qi R., Shue B.C., Wang A., Wang J., Wang X., Yan X., Ye J.,  
 RA Yooseph S., Zhao Q., Zheng L., Zhu S.C., Biddick K., Bolanos R.,  
 RA Delcher A.L., Dew I.M., Fasulo D., Flanigan M.J., Huson D.H.,  
 RA Kravitz S.A., Miller J.R., Mobarry C.M., Reinert K., Remington K.A.,  
 RA Zhang Q., Zheng X.H., Nusskern D.R., Lai Z., Lei Y., Zhong W., Yao A.,  
 RA Guan P., Ji R.R., Gu Z., Wang Z.Y., Zhong F., Xiao C., Chiang C.C.,  
 RA Yandell M., Wortman J.R., Amanatides P.G., Hladun S.L., Pratts E.C.,

RA Johnson J.E., Dodson K.L., Woodford K.J., Evans C.A., Gropman B.,  
 RA Rusch D.B., Venter E., Wang M., Smith T.J., Houck J.T., Tompkins D.E.,  
 RA Haynes C., Jacob D., Chin S.H., Allen D.R., Dahlke C.E., Sanders R.,  
 RA Li K., Liu X., Levitsky A.A., Majoros W.H., Chen Q., Xia A.C.,  
 RA Lopez J.R., Donnelly M.T., Newman M.H., Glodek A., Kraft C.L.,  
 RA Nodell M., Ali F., An H.J., Baldwin-Pitts D., Beeson K.Y., Cai S.,  
 RA Carnes M., Carver A., Caulk P.M., Center A., Chen Y.H., Cheng M.L.,  
 RA Coyne M.D., Crowder M., Danaher S., Davenport L.B., Desilets R.,  
 RA Dietz S.M., Doup L., Dullaghan P., Ferriera S., Fosler C.R.,  
 RA Gire H.C., Gluecksmann A., Gocayne J.D., Gray J., Hart B., Haynes J.,  
 RA Hoover J., Howland T., Ibegwam C., Jalali M., Johns D., Kline L.,  
 RA Ma D.S., MacCawley S., Magoon A., Mann F., May D., McIntosh T.C.,  
 RA Mehta S., Moy L., Moy M.C., Murphy B.J., Murphy S.D., Nelson K.A.,  
 RA Nuri Z., Parker K.A., Prudhomme A.C., Puri V.N., Qureshi H.,  
 RA Raley J.C., Reardon M.S., Regier M.A., Rogers Y.H., Romblad D.L.,  
 RA Schutz J., Scott J.L., Scott R., Sitter C.D., Smallwood M.,  
 RA Sprague A.C., Stewart E., Strong R.V., Suh E., Sylvester K.,  
 RA Thomas R., Tint N.N., Tsionis C., Wang G., Wang G., Williams M.S.,  
 RA Williams S.M., Windsor S.M., Wolfe K., Wu M.M., Zaveri J.,  
 RA Chaturvedi K., Gabrielian A.E., Ke Z., Sun J., Subramanian G.,  
 RA Venter J.C., Pfannkoch C.M., Barnstead M., Stephenson L.D.;  
 RT "A comparison of whole-genome shotgun-derived mouse chromosome 16 and  
 RT the human genome.";  
 RL Science 296:1661-1671(2002).

RN [3]

RP NUCLEOTIDE SEQUENCE.

RC STRAIN=Mixed;

RA Mural R.J., Adams M.D., Myers E.W., Smith H.O., Venter J.C.;

RL Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.

RN [4]

RP NUCLEOTIDE SEQUENCE [LARGE SCALE mRNA].

RC STRAIN=Czech II; TISSUE= Mammary tumor metastatized to lung. Tumor

RC arose spontaneously;

RX PubMed=15489334; DOI=10.1101/gr.2596504;

RG The MGC Project Team;

RT "The status, quality, and expansion of the NIH full-length cDNA

RT project: the Mammalian Gene Collection (MGC).";

RL Genome Res. 14:2121-2127(2004).

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CC -----

DR EMBL; BC110679; AAI10680.1; -; mRNA.

DR EMBL; AK083824; BAC39030.1; -; mRNA.

DR EMBL; AK156758; BAE33841.1; -; mRNA.

DR EMBL; AK167636; BAE39687.1; -; mRNA.

DR EMBL; AK168382; BAE40310.1; -; mRNA.

DR EMBL; AK168471; BAE40362.1; -; mRNA.

DR EMBL; CH466550; EDL03927.1; -; Genomic\_DNA.

DR IPI; IPI00139637; -.

DR RefSeq; NP\_062791.1; -.

DR UniGene; Mm.29473; -.

DR ProteinModelPortal; Q542M2; -.

DR SMR; Q542M2; 1-149.

DR STRING; Q542M2; -.

DR PRIDE; Q542M2; -.

DR Ensembl; ENSMUST00000100162; ENSMUSP00000097738; ENSMUSG00000060992.

DR GeneID; 56447; -.

DR KEGG; mmu:56447; -.

DR CTD; 56447; -.

DR MGI; MGI:1929063; Copz1.

DR HOVERGEN; HBG051077; -.

DR InParanoid; Q542M2; -.

DR OMA; YDDTYPT; -.

DR PhylomeDB; Q542M2; -.

DR NextBio; 312654; -.

DR ArrayExpress; Q542M2; -.

DR Bgee; Q542M2; -.  
 DR Genevestigator; Q542M2; -.  
 DR GO; GO:0030117; C:membrane coat; IEA:InterPro.  
 DR GO; GO:0005515; F:protein binding; IEA:InterPro.  
 DR GO; GO:0006886; P:intracellular protein transport; IEA:InterPro.  
 DR InterPro; IPR022775; AP\_mu\_sigma\_su.  
 DR InterPro; IPR000804; Clathrin\_sm-chain\_CS.  
 DR InterPro; IPR011012; Longin-like.  
 DR Pfam; PF01217; Clat\_adaptor\_s; 1.  
 DR SUPFAM; SSF64356; Longin\_like; 1.  
 DR PROSITE; PS00989; CLAT\_ADAPTER\_S; 1.  
 PE 2: Evidence at transcript level;  
 SQ SEQUENCE 177 AA; 20198 MW; 355530D032D3A049 CRC64;

Query Match 100.0%; Score 882; DB 2; Length 177;  
 Best Local Similarity 100.0%;  
 Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy	1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFENKNIFNKTHRTDSEIA 60
Db	1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFENKNIFNKTHRTDSEIA 60
Qy	61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKVNVEKRALLEMEG 120
Db	61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKVNVEKRALLEMEG 120
Qy	121 LFLAVDEIVDGKVILESDPQQVVHRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177
Db	121 LFLAVDEIVDGKVILESDPQQVVHRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177

## RESULT 6

COPZ1\_BOVIN

ID COPZ1\_BOVIN Reviewed; 177 AA.  
 AC P35604; Q5EA44;  
 DT 01-JUN-1994, integrated into UniProtKB/Swiss-Prot.  
 DT 27-JUN-2006, sequence version 2.  
 DT 05-OCT-2010, entry version 74.  
 DE RecName: Full=Coatomer subunit zeta-1;  
 DE AltName: Full=Zeta-1-coat protein;  
 DE Short=Zeta-1 COP;  
 GN Name=COPZ1; Synonyms=COPZ;  
 OS Bos taurus (Bovine).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;  
 OC Pecora; Bovidae; Bovinae; Bos.  
 OX NCBI\_TaxID=9913;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE [mRNA], AND PROTEIN SEQUENCE OF 55-70; 113-129 AND  
 RP 146-160.  
 RC TISSUE=Liver;  
 RX MEDLINE=94103328; PubMed=8276893; DOI=10.1083/jcb.123.6.1727;  
 RA Kuge O., Hara-Kuge S., Orci L., Ravazzola M., Amherdt M., Tanigawa G.,  
 RA Wieland F.T., Rothman J.E.;  
 RT "Zeta-COP, a subunit of coatomer, is required for COP-coated vesicle  
 assembly.";  
 RL J. Cell Biol. 123:1727-1734(1993).  
 RN [2]  
 RP NUCLEOTIDE SEQUENCE [LARGE SCALE mRNA].  
 RX PubMed=16305752; DOI=10.1186/1471-2164-6-166;  
 RA Harhay G.P., Sonstegard T.S., Keele J.W., Heaton M.P., Clawson M.L.,  
 RA Snelling W.M., Wiedmann R.T., Van Tassell C.P., Smith T.P.L.;  
 RT "Characterization of 954 bovine full-CDS cDNA sequences.";  
 RL BMC Genomics 6:166-166(2005).  
 RN [3]  
 RP NUCLEOTIDE SEQUENCE [LARGE SCALE mRNA].  
 RC STRAIN=Crossbred X Angus; TISSUE=Ileum;

RG NIH - Mammalian Gene Collection (MGC) project;  
 RL Submitted (AUG-2005) to the EMBL/GenBank/DDBJ databases.  
 CC -!- FUNCTION: The coatomer is a cytosolic protein complex that binds  
     to dilysine motifs and reversibly associates with Golgi non-  
     clathrin-coated vesicles, which further mediate biosynthetic  
     protein transport from the ER, via the Golgi up to the trans Golgi  
     network. Coatomer complex is required for budding from Golgi  
     membranes, and is essential for the retrograde Golgi-to-ER  
     transport of dilysine-tagged proteins. In mammals, the coatomer  
     can only be recruited by membranes associated to ADP-ribosylation  
     factors (ARFs), which are small GTP-binding proteins; the complex  
     also influences the Golgi structural integrity, as well as the  
     processing, activity, and endocytic recycling of LDL receptors (By  
     similarity).  
 CC -!- FUNCTION: The zeta subunit may be involved in regulating the coat  
     assembly and, hence, the rate of biosynthetic protein transport  
     due to its association-dissociation properties with the coatomer  
     complex.  
 CC -!- SUBUNIT: Oligomeric complex that consists of at least the alpha,  
     beta, beta', gamma, delta, epsilon and zeta subunits.  
 CC -!- SUBCELLULAR LOCATION: Cytoplasm (By similarity). Golgi apparatus  
     membrane; Peripheral membrane protein; Cytoplasmic side (By  
     similarity). Cytoplasmic vesicle, COPI-coated vesicle membrane;  
     Peripheral membrane protein; Cytoplasmic side (By similarity).  
 CC Note=The coatomer is cytoplasmic or polymerized on the cytoplasmic  
     side of the Golgi, as well as on the vesicles/buds originating  
     from it (By similarity).  
 CC -!- PTM: Phosphorylated upon DNA damage, probably by ATM or ATR (By  
     similarity).  
 CC -!- SIMILARITY: Belongs to the adaptor complexes small subunit family.  
 CC -----  
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 CC -----  
 DR EMBL; X75935; CAA53539.1; -; mRNA.  
 DR EMBL; BT020662; AAX08679.1; -; mRNA.  
 DR EMBL; BT020725; AAX08742.1; -; mRNA.  
 DR EMBL; BC102358; AAI02359.1; -; mRNA.  
 DR IPI; IPI00685319; -.  
 DR PIR; A49465; A49465.  
 DR RefSeq; NP\_776707.2; -.  
 DR UniGene; Bt.43744; -.  
 DR ProteinModelPortal; P35604; -.  
 DR SMR; P35604; 1-149.  
 DR IntAct; P35604; 2.  
 DR STRING; P35604; -.  
 DR Ensembl; ENSBTAT00000007088; ENSBTAP00000007088; ENSBTAG00000005384.  
 DR GeneID; 281707; -.  
 DR KEGG; bta:281707; -.  
 DR CTD; 281707; -.  
 DR eggNOG; maNOG17869; -.  
 DR HOVERGEN; HBG051077; -.  
 DR InParanoid; P35604; -.  
 DR OMA; YDDTYPT; -.  
 DR OrthoDB; EOG969TD6; -.  
 DR PhylomeDB; P35604; -.  
 DR BioCyc; CATTLE:281707-MONOMER; -.  
 DR GO; GO:0030126; C:COPI vesicle coat; IDA:UniProtKB.  
 DR GO; GO:0005515; F:protein binding; IEA:InterPro.  
 DR GO; GO:0006891; P:intra-Golgi vesicle-mediated transport; IDA:UniProtKB.  
 DR GO; GO:0006886; P:intracellular protein transport; IEA:InterPro.  
 DR GO; GO:0006890; P:retrograde vesicle-mediated transport, Golg. . .; TAS:UniProtKB.  
 DR InterPro; IPR022775; AP\_mu\_sigma\_su.  
 DR InterPro; IPR000804; Clathrin\_sm-chain\_CS.  
 DR InterPro; IPR011012; Longin-like.  
 DR Pfam; PF01217; Clat\_adaptor\_s; 1.  
 DR SUPFAM; SSF64356; Longin\_like; 1.

DR PROSITE; PS00989; CLAT\_ADAPTER\_S; 1.  
 PE 1: Evidence at protein level;  
 KW Acetylation; Cytoplasm; Cytoplasmic vesicle;  
 KW Direct protein sequencing; ER-Golgi transport; Golgi apparatus;  
 KW Membrane; Phosphoprotein; Protein transport; Transport.  
 FT CHAIN 1 177 Coatomer subunit zeta-1.  
 FT /FTId=PRO\_0000193824.  
 FT MOD\_RES 1 1 N-acetylmethionine (By similarity).  
 FT MOD\_RES 161 161 Phosphoserine (By similarity).  
 FT CONFLICT 7 7 E -> Q (in Ref. 1; CAA53539).  
 SQ SEQUENCE 177 AA; 20228 MW; D410249532C8BAF8 CRC64;  
  
 Query Match 99.5%; Score 878; DB 1; Length 177;  
 Best Local Similarity 99.4%;  
 Matches 176; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
  
 Qy 1 MEALILEPSLYTVKAILILDNDGDRIFAKYYDDTYPNVKEQKAFENKNIFNKTHRTDSEIA 60  
 |||||||  
 Db 1 MEALILEPSLYTVKAILILDNDGDRIFAKYYDDTYPNVKEQKAFENKNIFNKTHRTDSEIA 60  
  
 Qy 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKVNVEKRALLEMEG 120  
 |||||||  
 Db 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMTLNCLFDLSQMLRKVNVEKRALLEMEG 120  
  
 Qy 121 LFLAVDEIVDGIVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177  
 |||||||  
 Db 121 LFLAVDEIVDGIVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177

## RESULT 7

Q53FU3\_HUMAN  
 ID Q53FU3\_HUMAN Unreviewed; 177 AA.  
 AC Q53FU3;  
 DT 24-MAY-2005, integrated into UniProtKB/TrEMBL.  
 DT 24-MAY-2005, sequence version 1.  
 DT 05-OCT-2010, entry version 31.  
 DE SubName: Full=Coatomer protein complex, subunit zeta 1 variant;  
 DE Flags: Fragment;  
 OS Homo sapiens (Human).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Euarchontoglires; Primates; Haplorrhini;  
 OC Catarrhini; Hominidae; Homo.  
 OX NCBI\_TaxID=9606;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE.  
 RC TISSUE=Renal proximal tubule;  
 RX MEDLINE=94171032; PubMed=8125298; DOI=10.1016/0378-1119(94)90802-8;  
 RA Maruyama K., Sugano S.;  
 RT "Oligo-capping: a simple method to replace the cap structure of  
 eukaryotic mRNAs with oligoribonucleotides.";  
 RL Gene 138:171-174(1994).  
 RN [2]  
 RP NUCLEOTIDE SEQUENCE.  
 RC TISSUE=Renal proximal tubule;  
 RX MEDLINE=98038986; PubMed=9373149; DOI=10.1016/S0378-1119(97)00411-3;  
 RA Suzuki Y., Yoshitomo K., Maruyama K., Suyama A., Sugano S.;  
 RT "Construction and characterization of a full length-enriched and a 5'-  
 end-enriched cDNA library.";  
 RL Gene 200:149-156(1997).  
 RN [3]  
 RP NUCLEOTIDE SEQUENCE.  
 RC TISSUE=Renal proximal tubule;  
 RA Suzuki Y., Sugano S., Totoki Y., Toyoda A., Takeda T., Sakaki Y.,  
 RA Tanaka A., Yokoyama S.;  
 RL Submitted (APR-2005) to the EMBL/GenBank/DDBJ databases.  
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 CC -----  
 DR EMBL; AK223188; BAD96908.1; -; mRNA.  
 DR IPI; IPI00032851; -.  
 DR UniGene; Hs.505652; -.  
 DR STRING; Q53FU3; -.  
 DR Ensembl; ENST00000262061; ENSP00000262061; ENSG00000111481.  
 DR HGNC; HGNC:2243; COPZ1.  
 DR HOVERGEN; HBG051077; -.  
 DR ArrayExpress; Q53FU3; -.  
 DR Bgee; Q53FU3; -.  
 DR GO; GO:0030117; C:membrane coat; IEA:InterPro.  
 DR GO; GO:0005515; F:protein binding; IEA:InterPro.  
 DR GO; GO:0006886; P:intracellular protein transport; IEA:InterPro.  
 DR GO; GO:0016192; P:vesicle-mediated transport; IEA:InterPro.  
 DR InterPro; IPR022775; AP\_mu\_sigma\_su.  
 DR InterPro; IPR000804; Clathrin\_sm-chain\_CS.  
 DR InterPro; IPR011012; Longin-like.  
 DR Pfam; PF01217; Clat\_adaptor\_s; 1.  
 DR SUPFAM; SSF64356; Longin\_like; 1.  
 DR PROSITE; PS00989; CLAT\_ADAPTER\_S; 1.  
 PE 2: Evidence at transcript level;  
 FT NON\_TER 1 1  
 SQ SEQUENCE 177 AA; 20267 MW; 5E2530D17696A10D CRC64;

Query Match 99.4%; Score 877; DB 2; Length 177;  
 Best Local Similarity 99.4%;  
 Matches 176; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60  
   ||||||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||  
 Db 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60  
  
 Qy 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKVNVEKRALLEMEG 120  
   ||||||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||  
 Db 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSLRQMLRKVNVEKRALLEMEG 120  
  
 Qy 121 LFLAVDEIVDGGVILESDPQQVVHRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177  
   ||||||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||  
 Db 121 LFLAVDEIVDGGVILESDPQQVVHRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177

## RESULT 8

Q28HL1\_XENTR  
 ID Q28HL1\_XENTR Unreviewed; 177 AA.  
 AC Q28HL1;  
 DT 04-APR-2006, integrated into UniProtKB/TrEMBL.  
 DT 04-APR-2006, sequence version 1.  
 DT 05-OCT-2010, entry version 22.  
 DE SubName: Full=OTTXETP00000008162;  
 GN Name=copz1; ORFNames=TTpA002p21.1-001;  
 OS Xenopus tropicalis (Western clawed frog) (Silurana tropicalis).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;  
 OC Xenopodinae; Xenopus; Silurana.  
 OX NCBI\_TaxID=8364;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE.  
 RA Amaya E., Ashurst J.L., Bonfield J.K., Croning M.D.R., Chen C-K.,  
 RA Davies R.M., Francis M.D., Garrett N., Gilchrist M.J., Grafham D.V.,  
 RA McLaren S.R., Papalopulu N., Rogers J., Smith J.C., Taylor R.G.,  
 RA Voigt J., Zorn A.M.;  
 RL Submitted (OCT-2006) to the EMBL/GenBank/DDBJ databases.  
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DR EMBL; CR760836; CAJ83159.1; -; mRNA.  
 DR UniGene; Str.5365; -.  
 DR ProteinModelPortal; Q28HL1; -.  
 DR SMR; Q28HL1; 1-149.  
 DR STRING; Q28HL1; -.  
 DR HOVERGEN; HBG051077; -.  
 DR GO; GO:0030117; C:membrane coat; IEA:InterPro.  
 DR GO; GO:0005515; F:protein binding; IEA:InterPro.  
 DR GO; GO:0006886; P:intracellular protein transport; IEA:InterPro.  
 DR GO; GO:0016192; P:vesicle-mediated transport; IEA:InterPro.  
 DR InterPro; IPR022775; AP\_mu\_sigma\_su.  
 DR InterPro; IPR000804; Clathrin\_sm-chain\_CS.  
 DR InterPro; IPR011012; Longin-like.  
 DR Pfam; PF01217; Clat\_adaptor\_s; 1.  
 DR SUPFAM; SSF64356; Longin\_like; 1.  
 DR PROSITE; PS00989; CLAT\_ADAPTER\_S; 1.  
 PE 2: Evidence at transcript level;  
 SQ SEQUENCE 177 AA; 20202 MW; 4739F11DFDBBD25E CRC64;

Query Match 96.0%; Score 847; DB 2; Length 177;  
 Best Local Similarity 93.2%;  
 Matches 165; Conservative 11; Mismatches 1; Indels 0; Gaps 0;

Qy	1 MEALILEPSPLYTVKAILILDNDGDRLFAYKYYDDTYSVKEQKAFEKNIFNKTHRTDSEIA 60
	: :: :     :     :     :     :   :     :     :     :
Db	1 MDAILLDPSLYTVKAVALILDNDGERLFAYKYYDETYPTVKEQKAFEKNIFNKTHRTDSEIA 60
Qy	61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKVNVEKRALLENMEG 120
	:     :     :     :     :     :     :     :     :
Db	61 LLEGLTVVYKSSIDLYFYVIGSSHENELMLMAVLNCLFDLSQMLRKVNVEKRTLLENMEG 120
Qy	121 LFLAVDEIVDGKVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177
	:     :     :     :     :     :     :     :
Db	121 LFLAVDEIIDGGVILESDPQQVVRVALRGDDVPLTEQTVSQVLQSAKEQIKWSLLR 177

## RESULT 9

A0AUT9\_XENLA  
 ID A0AUT9\_XENLA Unreviewed; 177 AA.  
 AC A0AUT9;  
 DT 28-NOV-2006, integrated into UniProtKB/TrEMBL.  
 DT 28-NOV-2006, sequence version 1.  
 DT 05-OCT-2010, entry version 17.  
 DE SubName: Full=Copz1 protein;  
 GN Name=Copz1;  
 OS Xenopus laevis (African clawed frog).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;  
 OC Xenopodinae; Xenopus; Xenopus.  
 OX NCBI\_TaxID=8355;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE [LARGE SCALE RNA].  
 RC TISSUE=Embryo;  
 RG NIH - Xenopus Gene Collection (XGC) project;  
 RL Submitted (OCT-2006) to the EMBL/GenBank/DDBJ databases.  
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 CC -----  
 DR EMBL; BC124924; AAI24925.1; -; mRNA.  
 DR UniGene; X1.76078; -.  
 DR ProteinModelPortal; A0AUT9; -.  
 DR SMR; A0AUT9; 1-149.  
 DR HOVERGEN; HBG051077; -.  
 DR GO; GO:0030117; C:membrane coat; IEA:InterPro.  
 DR GO; GO:0005515; F:protein binding; IEA:InterPro.  
 DR GO; GO:0006886; P:intracellular protein transport; IEA:InterPro.

DR GO; GO:0016192; P:vesicle-mediated transport; IEA:InterPro.  
 DR InterPro; IPR022775; AP\_mu\_sigma\_su.  
 DR InterPro; IPR000804; Clathrin\_sm-chain\_CS.  
 DR InterPro; IPR011012; Longin-like.  
 DR Pfam; PF01217; Clat\_adaptor\_s; 1.  
 DR SUPFAM; SSF64356; Longin\_like; 1.  
 DR PROSITE; PS00989; CLAT\_ADAPTER\_S; 1.  
 PE 2: Evidence at transcript level;  
 SQ SEQUENCE 177 AA; 20188 MW; 529B50DAF6D85058 CRC64;

Query Match 95.9%; Score 846; DB 2; Length 177;  
 Best Local Similarity 93.2%;  
 Matches 165; Conservative 11; Mismatches 1; Indels 0; Gaps 0;

Qy 1 MEALILEPSLYTVKAILIILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60  
 :::::::::::::::::::::|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:  
 Db 1 MDAVLLDPSLYTVKAVALIILDNDGERLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60  
 Qy 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKVNVEKRALLENMEG 120  
 ::|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:  
 Db 61 LLEGLTVVYKSSIDLYFYVIGSSHENELMLMAVLNCLFDLSQMLRKVNVEKRTLLENMEG 120  
 Qy 121 LFLAVDEIVDGGVILESDPQQVVHRVALRGEDVPVTEQTVSQVLQSAKEQIKWSLLR 177  
 ::|||||:|||||:|||||:|||||:|||||:|||||:|||||:  
 Db 121 LFLAVDEIIDGGVILESDPQQVVHRVALRGDDVPVTEQTVSQVLQSAKEQIKWSLLR 177

RESULT 10  
 Q801P3\_XENLA  
 ID Q801P3\_XENLA Unreviewed; 187 AA.  
 AC Q801P3;  
 DT 01-JUN-2003, integrated into UniProtKB/TrEMBL.  
 DT 01-JUN-2003, sequence version 1.  
 DT 05-OCT-2010, entry version 29.  
 DE SubName: Full=Copz1 protein;  
 DE Flags: Fragment;  
 GN Name=Copz1;  
 OS Xenopus laevis (African clawed frog).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;  
 OC Xenopodinae; Xenopus; Xenopus.  
 OX NCBI\_TaxID=8355;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE [LARGE SCALE mRNA].  
 RC TISSUE=Embryo;  
 RG NIH - Xenopus Gene Collection (XGC) project;  
 RL Submitted (MAR-2003) to the EMBL/GenBank/DDBJ databases.  
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 CC -----  
 DR EMBL; BC047988; AAH47988.1; -; mRNA.  
 DR UniGene; X1.76078; -.  
 DR ProteinModelPortal; Q801P3; -.  
 DR HOVERGEN; HBG051077; -.  
 DR GO; GO:0030117; C:membrane coat; IEA:InterPro.  
 DR GO; GO:0005515; F:protein binding; IEA:InterPro.  
 DR GO; GO:0006886; P:intracellular protein transport; IEA:InterPro.  
 DR GO; GO:0016192; P:vesicle-mediated transport; IEA:InterPro.  
 DR InterPro; IPR022775; AP\_mu\_sigma\_su.  
 DR InterPro; IPR000804; Clathrin\_sm-chain\_CS.  
 DR InterPro; IPR011012; Longin-like.  
 DR Pfam; PF01217; Clat\_adaptor\_s; 1.  
 DR SUPFAM; SSF64356; Longin\_like; 1.  
 DR PROSITE; PS00989; CLAT\_ADAPTER\_S; 1.  
 PE 2: Evidence at transcript level;  
 FT NON\_TER 1 1

SQ SEQUENCE 187 AA; 21167 MW; 7BC34FFA40CA56E4 CRC64;

Query Match 95.9%; Score 846; DB 2; Length 187;  
 Best Local Similarity 93.2%;  
 Matches 165; Conservative 11; Mismatches 1; Indels 0; Gaps 0;

Qy 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFKNIFNKTHRTDSEIA 60  
 :::::|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:  
 Db 11 MDAVLLDPSLYTVKAVLILDNDGERLFAKYDDTYPNVKEQKAFKNIFNKTHRTDSEIA 70

Qy 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKVNVEKRALLENMEG 120  
 |||||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:  
 Db 71 LLEGLTVVYKSSIDLYFYVIGSSHENELMLMAVLNCLFDLSQMLRKVNVEKRTLLENMEG 130

Qy 121 LFLAVDEIVDGGVILESDPQQVVHRLVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177  
 |||||||:|||||:|||||:|||||:|||||:|||||:|||||:  
 Db 131 LFLAVDEIIDGGVILESDPQQVVHRLVALRGDDVPLTEQTVSQVLQSAKEQIKWSLLR 187

## RESULT 11

Q9IB48\_DANRE

ID Q9IB48\_DANRE Unreviewed; 177 AA.  
 AC Q9IB48;  
 DT 01-OCT-2000, integrated into UniProtKB/TrEMBL.  
 DT 01-OCT-2000, sequence version 1.  
 DT 05-OCT-2010, entry version 48.  
 DE SubName: Full=Nonclathrin coat protein zeta1-COP;  
 GN Name=copz1;  
 OS Danio rerio (Zebrafish) (Brachydanio rerio).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes;  
 OC Cyprinidae; Danio.  
 OX NCBI\_TaxID=7955;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE.  
 RA Hahn Y., Chung J.H.;  
 RT "Identification of zeta-COP genes from various organisms.";  
 RL Submitted (MAR-2000) to the EMBL/GenBank/DDBJ databases.

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---

DR EMBL; AB040044; BAA92783.1; -; mRNA.  
 DR IPI; IPI00489034; -.  
 DR RefSeq; NP\_571583.1; -.  
 DR UniGene; Dr.79072; --.  
 DR ProteinModelPortal; Q9IB48; -.  
 DR SMR; Q9IB48; 1-149.  
 DR STRING; Q9IB48; -.  
 DR Ensembl; ENSDART00000011201; ENSDARP00000015008; ENSDARG00000017844.  
 DR GeneID; 57970; -.  
 DR KEGG; dre:57970; -.  
 DR NMPDR; fig|7955.3.peg.20733; -.  
 DR CTD; 57970; -.  
 DR ZFIN; ZDB-GENE-000406-6; copz1.  
 DR HOVERGEN; HBG051077; -.  
 DR InParanoid; Q9IB48; -.  
 DR OMA; YDDTYPT; -.  
 DR OrthoDB; EOG969TD6; -.  
 DR PhylomeDB; Q9IB48; --.  
 DR ArrayExpress; Q9IB48; -.  
 DR Bgee; Q9IB48; -.  
 DR GO; GO:0030117; C:membrane coat; IEA:InterPro.  
 DR GO; GO:0005515; F:protein binding; IEA:InterPro.  
 DR GO; GO:0006886; P:intracellular protein transport; IEA:InterPro.  
 DR GO; GO:0002088; P:lens development in camera-type eye; IMP:ZFIN.  
 DR GO; GO:0016192; P:vesicle-mediated transport; IEA:InterPro.



DR PROSITE; PS00989; CLAT\_ADAPTER\_S; 1.  
 PE 2: Evidence at transcript level;  
 SQ SEQUENCE 177 AA; 20174 MW; 529B51DBF6D95158 CRC64;

Query Match 95.6%; Score 843; DB 2; Length 177;  
 Best Local Similarity 92.7%;  
 Matches 164; Conservative 12; Mismatches 1; Indels 0; Gaps 0;

Qy 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60  
   |:|::|:|||||:|||||:|||||:|||||:||||:|||||:|||||:|||||:|||||:  
 Db 1 MDAVLLDPLSYTVKAVLILDNDGERLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60

Qy 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLENMEG 120  
   |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:  
 Db 61 LLEGLTVVYKSSIDLYFYVIGSSHENELMLMAVLNCLFDLSQMLRKNVEKRTLLENMDG 120

Qy 121 LFLAVDEIVDGGVILESDPQQVVHVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177  
   |||||:|||||:|||||:|||||:  
 Db 121 LFLAVDEIIDGGVILESDPQQVVHVALRGDDVPLTEQTVSQVLQSAKEQIKWSLLR 177

## RESULT 13

Q7SXH1\_DANRE  
 ID Q7SXH1\_DANRE Unreviewed; 177 AA.  
 AC Q7SXH1;  
 DT 01-OCT-2003, integrated into UniProtKB/TrEMBL.  
 DT 01-OCT-2003, sequence version 1.  
 DT 05-OCT-2010, entry version 41.  
 DE SubName: Full=Coatomer protein complex, subunit zeta 1;  
 GN Name=copz1;  
 OS Danio rerio (Zebrafish) (Brachydanio rerio).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes;  
 OC Cyprinidae; Danio.  
 OX NCBI\_TaxID=7955;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].  
 RC TISSUE=Whole body;  
 RG NIH - Zebrafish Gene Collection (ZGC) project;  
 RL Submitted (AUG-2003) to the EMBL/GenBank/DDBJ databases.  
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 CC -----  
 DR EMBL; BC055604; AAH55604.1; -; mRNA.  
 DR IPI; IPI00489034; -.  
 DR UniGene; Dr.79072; -.  
 DR ProteinModelPortal; Q7SXH1; -.  
 DR SMR; Q7SXH1; 1-149.  
 DR STRING; Q7SXH1; -.  
 DR PRIDE; Q7SXH1; -.  
 DR Ensembl; ENSDART00000011201; ENSDARP00000015008; ENSDARG00000017844.  
 DR ZFIN; ZDB-GENE-000406-6; copz1.  
 DR eggNOG; f1NOG12172; -.  
 DR HOGENOM; HBG326766; -.  
 DR HOVERGEN; HBG051077; -.  
 DR InParanoid; Q7SXH1; -.  
 DR PhylomeDB; Q7SXH1; -.  
 DR ArrayExpress; Q7SXH1; -.  
 DR Bgee; Q7SXH1; -.  
 DR GO; GO:0030117; C:membrane coat; IEA:InterPro.  
 DR GO; GO:0005515; F:protein binding; IEA:InterPro.  
 DR GO; GO:0006886; P:intracellular protein transport; IEA:InterPro.  
 DR GO; GO:0016192; P:vesicle-mediated transport; IEA:InterPro.  
 DR InterPro; IPR022775; AP\_mu\_sigma\_su.  
 DR InterPro; IPR000804; Clathrin\_sm-chain\_CS.  
 DR InterPro; IPR011012; Longin-like.

DR Pfam; PF01217; Clat\_adaptor\_s; 1.  
 DR SUPFAM; SSF64356; Longin\_like; 1.  
 DR PROSITE; PS00989; CLAT\_ADAPTER\_S; 1.  
 PE 2: Evidence at transcript level;  
 SQ SEQUENCE 177 AA; 20311 MW; BC44BEC188939BDC CRC64;

Query Match 95.5%; Score 842; DB 2; Length 177;  
 Best Local Similarity 92.7%;  
 Matches 164; Conservative 12; Mismatches 1; Indels 0; Gaps 0;

Qy 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60  
   |:|||||||:|||:|||||:|||:|||||:|||||:|||||:|||||:|||||:  
 Db 1 MDTLILEPSLYTVKAVLIMDNDGERLYAKYYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60

Qy 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLENMEG 120  
   |||||:|||:|||||:|||:|||||:|||||:|||||:|||||:  
 Db 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLENMEG 120

Qy 121 LFLAVDEIVDGIVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177  
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 Db 121 LFLAVDEIVDGIVILESDPQQVVRVALRGDDVPLTEQTVQVLQSAKEQIKWSLLR 177

## RESULT 14

C3KJY4\_ANOFI  
 ID C3KJY4\_ANOFI                         Unreviewed;                 177 AA.  
 AC C3KJY4;  
 DT 16-JUN-2009, integrated into UniProtKB/TrEMBL.  
 DT 16-JUN-2009, sequence version 1.  
 DT 05-OCT-2010, entry version 8.  
 DE SubName: Full=Coatomer subunit zeta-1;  
 GN Name=COPZ1;  
 OS Anoplopoma fimbria (Sablefish).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;  
 OC Acanthomorpha; Acanthopterygii; Percomorpha; Scorpaeiformes;  
 OC Anoplopomatidae; Anoplopomatidae; Anoplopoma.  
 OX NCBI\_TaxID=229290;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE.  
 RC TISSUE=Brain;  
 RA Messmer A., Rondeau E., Sanderson D., Cooper G., Leong J., Koop B.F.;  
 RT "Anoplopoma fimbria ESTs and full-length cDNAs.";  
 RL Submitted (MAY-2009) to the EMBL/GenBank/DDBJ databases.  
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 CC  
 EMBL; BT083249; ACQ58956.1; -; mRNA.  
 DR GO; GO:0006810; P:transport; IEA:InterPro.  
 DR InterPro; IPR022775; AP\_mu\_sigma\_su.  
 DR InterPro; IPR011012; Longin-like.  
 DR Pfam; PF01217; Clat\_adaptor\_s; 1.  
 DR SUPFAM; SSF64356; Longin\_like; 1.  
 PE 2: Evidence at transcript level;  
 SQ SEQUENCE 177 AA; 20187 MW; E665075A8B25F591 CRC64;

Query Match 94.8%; Score 836; DB 2; Length 177;  
 Best Local Similarity 92.7%;  
 Matches 164; Conservative 12; Mismatches 1; Indels 0; Gaps 0;

Qy 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60  
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 Db 1 MDSPILEPSLHTVKAVLILNDNDGDRLYAKYYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60

Qy 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLENMEG 120  
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Db 61 LLEGLTVVYKSNIDLFFYIGSSHENELMLMAVLNCLFDLSQMLRKVNVERALLENMEG 120  
 Qy 121 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177  
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 Db 121 LFLAVDEIVDGGVILESDPQQVVRVALRGDDVPLTEQTVQVLQSAKEQIKWSLLR 177

RESULT 15

B5X5K5\_SALSA

ID B5X5K5\_SALSA Unreviewed; 177 AA.  
 AC B5X5K5;  
 DT 25-NOV-2008, integrated into UniProtKB/TrEMBL.  
 DT 25-NOV-2008, sequence version 1.  
 DT 02-NOV-2010, entry version 10.  
 DE SubName: Full=Coatomer subunit zeta-1;  
 GN Name=COPZ1;  
 OS Salmo salar (Atlantic salmon).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Actinopterygii; Neopterygii; Teleostei; Euteleostei;  
 OC Protacanthopterygii; Salmoniformes; Salmonidae; Salmoninae; Salmo.  
 OX NCBI\_TaxID=8030;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE.  
 RC TISSUE=Brain;  
 RX PubMed=20433749; DOI=10.1186/1471-2164-11-279;  
 RA Leong J.S., Jantzen S.G., von Schalburg K.R., Cooper G.A.,  
 RA Messmer A.M., Liao N.Y., Munro S., Moore R., Holt R.A., Jones S.J.,  
 RA Davidson W.S., Koop B.F.;  
 RT "Salmo salar and Esox lucius full-length cDNA sequences reveal changes  
 in evolutionary pressures on a post-tetraploidization genome.";  
 RL BMC Genomics 11:279-279(2010).  
 RN [2]  
 RP NUCLEOTIDE SEQUENCE.  
 RC TISSUE=Brain;  
 RG cGRASP (B.F. Koop & W.S. Davidson);  
 RA Leong J., von Schalburg K., Cooper G., Moore R., Holt R.,  
 RA Davidson W.S., Koop B.F.;  
 RL Submitted (OCT-2008) to the EMBL/GenBank/DDBJ databases.  
 RN [3]  
 RP NUCLEOTIDE SEQUENCE.  
 RC TISSUE=Brain;  
 RG cGRASP (B.F. Koop & W.S. Davidson);  
 RL Submitted (AUG-2010) to the EMBL/GenBank/DDBJ databases.  
 RN [4]  
 RP NUCLEOTIDE SEQUENCE.  
 RC TISSUE=Mixed brain;  
 RG cGRASP (B.F. Koop & W.S. Davidson);  
 RA Leong J., von Schalburg K., Cooper G., Moore R., Holt R.,  
 RA Davidson W.S., Koop B.F.;  
 RT "Salmo salar full-length cDNAs.";  
 RL Submitted (FEB-2009) to the EMBL/GenBank/DDBJ databases.  
 RN [5]  
 RP NUCLEOTIDE SEQUENCE.  
 RC TISSUE=Brain;  
 RG cGRASP (B.F. Koop & W.S. Davidson);  
 RA Leong J., von Schalburg K., Cooper G., Moore R., Holt R.,  
 RA Davidson W.S., Koop B.F.;  
 RL Submitted (FEB-2009) to the EMBL/GenBank/DDBJ databases.  
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 DR EMBL; BT046324; ACI66125.1; -; mRNA.  
 DR EMBL; BT058392; ACN10105.1; -; mRNA.  
 DR EMBL; BT060094; ACN12454.1; -; mRNA.  
 DR HOVERGEN; HBG051077; -.  
 DR GO; GO:0030117; C:membrane coat; IEA:InterPro.

DR GO; GO:0005515; F:protein binding; IEA:InterPro.  
 DR GO; GO:0006886; P:intracellular protein transport; IEA:InterPro.  
 DR GO; GO:0016192; P:vesicle-mediated transport; IEA:InterPro.  
 DR InterPro; IPR022775; AP\_mu\_sigma\_su.  
 DR InterPro; IPR000804; Clathrin\_sm-chain\_CS.  
 DR InterPro; IPR011012; Longin-like.  
 DR Pfam; PF01217; Clat\_adaptor\_s; 1.  
 DR SUPFAM; SSF64356; Longin\_like; 1.  
 DR PROSITE; PS00989; CLAT\_ADAPTER\_S; 1.  
 PE 2: Evidence at transcript level;  
 SQ SEQUENCE 177 AA; 20273 MW; 2BBAC0388F6E8E69 CRC64;

Query Match 94.3%; Score 832; DB 2; Length 177;  
 Best Local Similarity 92.1%;  
 Matches 163; Conservative 13; Mismatches 1; Indels 0; Gaps 0;

Qy 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60  
 ||::|| ||||:|||||:|||||:|||:|||||:|||:|||||:|||||:|||||:|||||:|||||:  
 Db 1 MDALSLEPTLYTVKAVLILDNDGERLYAKYYDETYPTVKEQKAFEKNIFNKTHRTDSEIA 60

Qy 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLENMEG 120  
 |||||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:  
 Db 61 LLEGLTVVYKSNIDLYFYVIGSSHENEMLMSVLNCLFDLSQMLRKNVERRALLENMEG 120

Qy 121 LFLAVDEIVDGGSVILESDPQQVVHRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177  
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 Db 121 LFLAVDEIVDGGSVILESDPQQVYRVALRGDDVPLTEQTVSQVLQSAKEQIKWSLLR 177

Search completed: December 14, 2010, 11:27:05

Job time : 96.872 secs

SCORE 3.0

# SCORE Search Results Details for Application 09556178 and Search Result 20101214\_103256\_us-09-556-178-5.rapbm

[Score Home Page](#) [Retrieve Application List](#) [SCORE System Overview](#) [SCORE FAQ](#) [Comments / Suggestions](#)

This page gives you Search Results detail for the Application 09556178 and Search Result 20101214\_103256\_us-09-556-178-5.rapbm.

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GenCore version 6.3  
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OM protein - protein search, using sw model

Run on: December 14, 2010, 11:27:17 ; Search time 143 Seconds  
(without alignments)  
1680.685 Million cell updates/sec

Title: US-09-556-178-5  
Perfect score: 882  
Sequence: 1 MEALILEPSLYTVKAILILD.....QTVSQVLQSAKEQIKWSLLR 177

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 6210261 seqs, 1354514112 residues

Total number of hits satisfying chosen parameters: 6210261

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : Published\_Applications\_AA\_Main:  
1: /ABSS/Data/CRF/ptodata/1/pubpaa/US07\_PUBCOMB.pep:  
2: /ABSS/Data/CRF/ptodata/1/pubpaa/US08\_PUBCOMB.pep:  
3: /ABSS/Data/CRF/ptodata/1/pubpaa/US09\_PUBCOMB.pep:  
4: /ABSS/Data/CRF/ptodata/1/pubpaa/US10A\_PUBCOMB.pep:  
5: /ABSS/Data/CRF/ptodata/1/pubpaa/US10B\_PUBCOMB.pep:  
6: /ABSS/Data/CRF/ptodata/1/pubpaa/US11A\_PUBCOMB.pep:  
7: /ABSS/Data/CRF/ptodata/1/pubpaa/US11B\_PUBCOMB.pep:  
8: /ABSS/Data/CRF/ptodata/1/pubpaa/US12\_PUBCOMB.pep:  
SUMMARIES

%

Result No.	Score	Query				Description
		Match	Length	DB	ID	
1	882	100.0	177	5	US-10-528-183-26	Sequence 26, Appl
2	882	100.0	177	6	US-11-371-354-73107	Sequence 73107, A
3	882	100.0	177	6	US-11-443-428A-819809	Sequence 819809,
4	882	100.0	177	7	US-11-597-825-1351	Sequence 1351, Ap
5	882	100.0	177	8	US-12-399-906-29	Sequence 29, Appl
6	882	100.0	192	6	US-11-443-428A-819804	Sequence 819804,
7	882	100.0	192	6	US-11-443-428A-819805	Sequence 819805,
8	882	100.0	192	6	US-11-443-428A-819806	Sequence 819806,
9	882	100.0	192	6	US-11-443-428A-819808	Sequence 819808,

10	882	100.0	192	6	US-11-443-428A-819810	Sequence 819810,
11	882	100.0	192	6	US-11-443-428A-819816	Sequence 819816,
12	882	100.0	192	6	US-11-443-428A-819818	Sequence 819818,
13	882	100.0	192	6	US-11-443-428A-819819	Sequence 819819,
14	882	100.0	192	6	US-11-443-428A-819821	Sequence 819821,
15	882	100.0	192	6	US-11-443-428A-819823	Sequence 819823,
16	882	100.0	192	6	US-11-443-428A-819825	Sequence 819825,
17	882	100.0	200	6	US-11-443-428A-819807	Sequence 819807,
18	882	100.0	205	6	US-11-443-428A-819812	Sequence 819812,
19	868	98.4	182	6	US-11-443-428A-819814	Sequence 819814,
20	858	97.3	172	6	US-11-443-428A-819813	Sequence 819813,
21	856	97.1	177	6	US-11-443-428A-819815	Sequence 819815,
22	856	97.1	178	6	US-11-443-428A-819811	Sequence 819811,
23	845	95.8	177	4	US-10-403-571-30	Sequence 30, Appl
24	712	80.7	144	4	US-10-425-115-275189	Sequence 275189,
25	712	80.7	144	5	US-10-425-115-275189	Sequence 275189,
26	701	79.5	173	6	US-11-443-428A-819820	Sequence 819820,
27	673	76.3	210	5	US-10-528-183-14	Sequence 14, Appl
28	673	76.3	210	5	US-10-743-643-2465	Sequence 2465, Ap
29	673	76.3	210	6	US-11-371-354-59225	Sequence 59225, A
30	673	76.3	210	8	US-12-399-906-30	Sequence 30, Appl
31	673	76.3	214	6	US-11-443-428A-823399	Sequence 823399,
32	564.5	64.0	160	6	US-11-097-143-7677	Sequence 7677, Ap
33	542	61.5	134	6	US-11-443-428A-819826	Sequence 819826,
34	518	58.7	136	6	US-11-443-428A-823401	Sequence 823401,
35	510	57.8	169	6	US-11-443-428A-823406	Sequence 823406,
36	507.5	57.5	181	7	US-11-360-355-120385	Sequence 120385,
37	507.5	57.5	181	7	US-11-360-355-122102	Sequence 122102,
38	507.5	57.5	181	8	US-12-101-830-120385	Sequence 120385,
39	507.5	57.5	181	8	US-12-101-830-122102	Sequence 122102,
40	487	55.2	177	6	US-11-443-428A-819824	Sequence 819824,
41	454	51.5	138	6	US-11-443-428A-823403	Sequence 823403,
42	441.5	50.1	154	7	US-11-360-355-123790	Sequence 123790,
43	441.5	50.1	154	8	US-12-101-830-123790	Sequence 123790,
44	440	49.9	99	3	US-09-925-297-776	Sequence 776, App
45	440	49.9	125	6	US-11-443-428A-819817	Sequence 819817,

## ALIGNMENTS

## RESULT 1

US-10-528-183-26  
; Sequence 26, Application US/10528183  
; Publication No. US20050226879A1  
; GENERAL INFORMATION:  
; APPLICANT: Ullman, Katharine  
; APPLICANT: Liu, Jin  
; APPLICANT: Prunuske, Amy  
; APPLICANT: Dimaano, Christian  
; TITLE OF INVENTION: METHODS AND COMPOSITIONS RELATED TO  
; TITLE OF INVENTION: INHIBITING NUCLEAR ENVELOPE BREAKDOWN  
; FILE REFERENCE: 21101.0045U2  
; CURRENT APPLICATION NUMBER: US/10/528,183  
; CURRENT FILING DATE: 2005-03-17  
; PRIOR APPLICATION NUMBER: PCT/US03/29267  
; PRIOR FILING DATE: 2003-09-17  
; PRIOR APPLICATION NUMBER: 60/411,248  
; PRIOR FILING DATE: 2002-09-17  
; NUMBER OF SEQ ID NOS: 35  
; SOFTWARE: FastSEQ for Windows Version 4.0  
; SEQ ID NO 26  
; LENGTH: 177  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Description of Artificial Sequence:/note =

; OTHER INFORMATION: synthetic construct  
US-10-528-183-26

Query Match 100.0%; Score 882; DB 5; Length 177;  
Best Local Similarity 100.0%;  
Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFKNIFNKTHRTDSEIA 60  
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Db 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFKNIFNKTHRTDSEIA 60

Qy 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLENMEG 120  
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Db 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLENMEG 120

Qy 121 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177  
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Db 121 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177

## RESULT 2

US-11-371-354-73107

; Sequence 73107, Application US/11371354

; Publication No. US20060275794A1

; GENERAL INFORMATION:

; APPLICANT: CARRINO, JOHN

; APPLICANT: LIANG, FENG

; TITLE OF INVENTION: COLLECTIONS OF MATCHED BIOLOGICAL REAGENTS AND METHODS FOR

; TITLE OF INVENTION: IDENTIFYING MATCHED REAGENTS

; FILE REFERENCE: INV-1005-UT2

; CURRENT APPLICATION NUMBER: US/11/371,354

; CURRENT FILING DATE: 2006-03-07

; PRIOR APPLICATION NUMBER: 60/673,045

; PRIOR FILING DATE: 2005-04-19

; PRIOR APPLICATION NUMBER: 60/665,199

; PRIOR FILING DATE: 2005-03-25

; PRIOR APPLICATION NUMBER: 60/665,200

; PRIOR FILING DATE: 2005-03-25

; PRIOR APPLICATION NUMBER: 60/659,493

; PRIOR FILING DATE: 2005-03-07

; PRIOR APPLICATION NUMBER: 60/659,492

; PRIOR FILING DATE: 2005-03-07

; PRIOR APPLICATION NUMBER: 60/953,586

; PRIOR FILING DATE: 2005-02-15

; PRIOR APPLICATION NUMBER: 60/651,390

; PRIOR FILING DATE: 2005-02-08

; NUMBER OF SEQ ID NOS: 78682

; SOFTWARE: PatentIn version 3.3

; SEQ ID NO 73107

; LENGTH: 177

; TYPE: PRT

; ORGANISM: Homo sapiens

US-11-371-354-73107

Query Match 100.0%; Score 882; DB 6; Length 177;  
Best Local Similarity 100.0%;  
Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFKNIFNKTHRTDSEIA 60  
|||||||||||||||||||||||||||||||||||||||||

Db 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFKNIFNKTHRTDSEIA 60

Qy 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLENMEG 120  
|||||||||||||||||||||||||||||||||||||

Db 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLENMEG 120

Qy 121 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177

Db 121 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177

## RESULT 3

US-11-443-428A-819809

; Sequence 819809, Application US/11443428A  
; Publication No. US20070083334A1  
; GENERAL INFORMATION:  
; APPLICANT: Mintz, Liat  
; APPLICANT: Xie, Hanqing  
; APPLICANT: Dahari, Dvir  
; APPLICANT: Levanon, Erez  
; APPLICANT: Freilich, Shiri  
; APPLICANT: Beck, Nili  
; APPLICANT: Zhu, Wei-Yong  
; APPLICANT: Wasserman, Alon  
; APPLICANT: Hermesh, Chen  
; APPLICANT: Azar, Idit  
; APPLICANT: Bernstein, Jeanne  
; TITLE OF INVENTION: METHODS AND SYSTEMS USEFUL FOR ANNOTATING BIOMOLECULAR SEQUENCES  
; FILE REFERENCE: 02/23929  
; CURRENT APPLICATION NUMBER: US/11/443,428A  
; CURRENT FILING DATE: 2006-05-31  
; NUMBER OF SEQ ID NOS: 1034312  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 819809  
; LENGTH: 177  
; TYPE: PRT  
; ORGANISM: Homo sapiens

US-11-443-428A-819809

Query Match 100.0%; Score 882; DB 6; Length 177;  
Best Local Similarity 100.0%;  
Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFKNIFNKTHRTDSEIA 60  
|||||||||||||||||||||||||||||||||||||||||||||||||||||

Db 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFKNIFNKTHRTDSEIA 60

Qy 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKVNVEKRALLEMEG 120  
|||||||||||||||||||||||||||||||||||||||||||||||||

Db 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKVNVEKRALLEMEG 120

Qy 121 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177  
|||||||||||||||||||||||||||||||||||||||||

Db 121 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177

## RESULT 4

US-11-597-825-1351

; Sequence 1351, Application US/11597825  
; Publication No. US20090297536A1  
; GENERAL INFORMATION:  
; APPLICANT: CHIN, Lynda  
; TITLE OF INVENTION: COMPOSITIONS, KITS, AND METHODS FOR  
; TITLE OF INVENTION: IDENTIFICATION, ASSESSMENT, PREVENTION, AND THERAPY OF  
; TITLE OF INVENTION: CANCER  
; FILE REFERENCE: DFN-059-2  
; CURRENT APPLICATION NUMBER: US/11/597,825  
; CURRENT FILING DATE: 2006-11-27  
; NUMBER OF SEQ ID NOS: 1528  
; SOFTWARE: FastSEQ for Windows Version 4.0  
; SEQ ID NO 1351  
; LENGTH: 177  
; TYPE: PRT  
; ORGANISM: Homo sapiens

US-11-597-825-1351

Query Match 100.0%; Score 882; DB 7; Length 177;  
 Best Local Similarity 100.0%;  
 Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60  
       |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||  
 Db 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60

Qy 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLEMEG 120  
       |||||||||||||||||||||||||||||||||||||||||||||||||||||||  
 Db 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLEMEG 120

Qy 121 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177  
       |||||||||||||||||||||||||||||||||||||||||||||||||||  
 Db 121 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177

## RESULT 5

US-12-399-906-29

; Sequence 29, Application US/12399906  
 ; Publication No. US20100226856A1  
 ; GENERAL INFORMATION  
 ; APPLICANT: Vitaliano, Franco  
 ; APPLICANT: Vitaliano, Gordana D  
 ; TITLE OF INVENTION: DYNAMIC BIO-NANOPARTICLE ELEMENTS  
 ; FILE REFERENCE: FV3011  
 ; CURRENT APPLICATION NUMBER: US/12/399,906  
 ; CURRENT FILING DATE: 2009-09-23  
 ; NUMBER OF SEQ ID NOS: 30  
 ; SOFTWARE: PatentIn version 3.5  
 ; SEQ ID NO 29  
 ; LENGTH: 177  
 ; TYPE: PRT  
 ; ORGANISM: Homo sapiens  
 ; PUBLICATION INFORMATION:  
 ; DATABASE ACCESSION NUMBER: UniProtKB/P61923  
 ; DATABASE ENTRY DATE: 2009-05-05  
 ; RELEVANT RESIDUES IN SEQ ID NO: (1)..(177)

US-12-399-906-29

Query Match 100.0%; Score 882; DB 8; Length 177;  
 Best Local Similarity 100.0%;  
 Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60  
       |||||||||||||||||||||||||||||||||||||||||||  
 Db 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60

Qy 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLEMEG 120  
       |||||||||||||||||||||||||||||||||||||||||||  
 Db 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLEMEG 120

Qy 121 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177  
       |||||||||||||||||||||||||||||||||||||||  
 Db 121 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177

## RESULT 6

US-11-443-428A-819804

; Sequence 819804, Application US/11443428A  
 ; Publication No. US20070083334A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Mintz, Liat  
 ; APPLICANT: Xie, Hanqing  
 ; APPLICANT: Dahari, Dvir

;
 APPLICANT: Levanon, Erez  
 APPLICANT: Freilich, Shiri  
 APPLICANT: Beck, Nili  
 APPLICANT: Zhu, Wei-Yong  
 APPLICANT: Wasserman, Alon  
 APPLICANT: Hermesh, Chen  
 APPLICANT: Azar, Idit  
 APPLICANT: Bernstein, Jeanne  
 TITLE OF INVENTION: METHODS AND SYSTEMS USEFUL FOR ANNOTATING BIOMOLECULAR SEQUENCES  
 FILE REFERENCE: 02/23929  
 CURRENT APPLICATION NUMBER: US/11/443,428A  
 CURRENT FILING DATE: 2006-05-31  
 NUMBER OF SEQ ID NOS: 1034312  
 SOFTWARE: PatentIn version 3.1  
 SEQ ID NO 819804  
 LENGTH: 192  
 TYPE: PRT  
 ORGANISM: Homo sapiens  
 US-11-443-428A-819804

Query Match 100.0%; Score 882; DB 6; Length 192;  
 Best Local Similarity 100.0%;  
 Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy	1	MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFKNIFNKTHRTDSEIA	60
Db	16	MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFKNIFNKTHRTDSEIA	75
Qy	61	LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKVNVEKRALLEMEG	120
Db	76	LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKVNVEKRALLEMEG	135
Qy	121	LFLAVDEIVDGGVILESDPQQVHVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR	177
Db	136	LFLAVDEIVDGGVILESDPQQVHVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR	192

RESULT 7  
 US-11-443-428A-819805  
 ; Sequence 819805, Application US/11443428A  
 ; Publication No. US20070083334A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Mintz, Liat  
 ; APPLICANT: Xie, Hanqing  
 ; APPLICANT: Dahari, Dvir  
 ; APPLICANT: Levanon, Erez  
 ; APPLICANT: Freilich, Shiri  
 ; APPLICANT: Beck, Nili  
 ; APPLICANT: Zhu, Wei-Yong  
 ; APPLICANT: Wasserman, Alon  
 ; APPLICANT: Hermesh, Chen  
 ; APPLICANT: Azar, Idit  
 ; APPLICANT: Bernstein, Jeanne  
 ; TITLE OF INVENTION: METHODS AND SYSTEMS USEFUL FOR ANNOTATING BIOMOLECULAR SEQUENCES  
 ; FILE REFERENCE: 02/23929  
 ; CURRENT APPLICATION NUMBER: US/11/443,428A  
 ; CURRENT FILING DATE: 2006-05-31  
 ; NUMBER OF SEQ ID NOS: 1034312  
 ; SOFTWARE: PatentIn version 3.1  
 ; SEQ ID NO 819805  
 ; LENGTH: 192  
 ; TYPE: PRT  
 ; ORGANISM: Homo sapiens  
 US-11-443-428A-819805

Query Match 100.0%; Score 882; DB 6; Length 192;  
 Best Local Similarity 100.0%;

```

Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qy      1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60
         ||||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db      16 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 75
         ||||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Qy      61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLELENMEG 120
         ||||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db      76 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLELENMEG 135
         ||||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Qy      121 LFLAVDEIVDGGSVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177
         ||||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db      136 LFLAVDEIVDGGSVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 192
         ||||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

```

## RESULT 8

US-11-443-428A-819806  
; Sequence 819806, Application US/11443428A  
; Publication No. US20070083334A1  
; GENERAL INFORMATION:  
; APPLICANT: Mintz, Liat  
; APPLICANT: Xie, Hanqing  
; APPLICANT: Dahari, Dvir  
; APPLICANT: Levanon, Erez  
; APPLICANT: Freilich, Shiri  
; APPLICANT: Beck, Nili  
; APPLICANT: Zhu, Wei-Yong  
; APPLICANT: Wasserman, Alon  
; APPLICANT: Hermesh, Chen  
; APPLICANT: Azar, Idit  
; APPLICANT: Bernstein, Jeanne  
; TITLE OF INVENTION: METHODS AND SYSTEMS USEFUL FOR ANNOTATING BIOMOLECULAR SEQUENCES  
; FILE REFERENCE: 02/23929  
; CURRENT APPLICATION NUMBER: US/11/443,428A  
; CURRENT FILING DATE: 2006-05-31  
; NUMBER OF SEQ ID NOS: 1034312  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 819806  
; LENGTH: 192  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-11-443-428A-819806

```

Query Match          100.0%; Score 882; DB 6; Length 192;
Best Local Similarity 100.0%;
Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qy      1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60
         ||||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db      16 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 75
         ||||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Qy      61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLELENMEG 120
         ||||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db      76 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLELENMEG 135
         ||||||| | | | | | | | | | | | | | | | | | | | | | | | | | | |
Qy      121 LFLAVDEIVDGGSVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177
         ||||||| | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db      136 LFLAVDEIVDGGSVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 192
         ||||||| | | | | | | | | | | | | | | | | | | | | | | | | | |

```

## RESULT 9

US-11-443-428A-819808  
; Sequence 819808, Application US/11443428A  
; Publication No. US20070083334A1  
; GENERAL INFORMATION:  
; APPLICANT: Mintz, Liat  
; APPLICANT: Xie, Hanqing

;
 APPLICANT: Dahari, Dvir
 APPLICANT: Levanon, Erez
 APPLICANT: Freilich, Shiri
 APPLICANT: Beck, Nili
 APPLICANT: Zhu, Wei-Yong
 APPLICANT: Wasserman, Alon
 APPLICANT: Hermesh, Chen
 APPLICANT: Azar, Idit
 APPLICANT: Bernstein, Jeanne
 TITLE OF INVENTION: METHODS AND SYSTEMS USEFUL FOR ANNOTATING BIOMOLECULAR SEQUENCES
 FILE REFERENCE: 02/23929
 CURRENT APPLICATION NUMBER: US/11/443,428A
 CURRENT FILING DATE: 2006-05-31
 NUMBER OF SEQ ID NOS: 1034312
 SOFTWARE: PatentIn version 3.1
 SEQ ID NO 819808
 LENGTH: 192
 TYPE: PRT
 ORGANISM: Homo sapiens
 US-11-443-428A-819808

Query Match 100.0%; Score 882; DB 6; Length 192;  
 Best Local Similarity 100.0%;  
 Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy	1	MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA	60
Db	16	MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA	75
Qy	61	LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLEMEG	120
Db	76	LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLEMEG	135
Qy	121	LFLAVDEIVDGIVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR	177
Db	136	LFLAVDEIVDGIVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR	192

RESULT 10  
 US-11-443-428A-819810  
 ; Sequence 819810, Application US/11443428A  
 ; Publication No. US20070083334A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Mintz, Liat  
 ; APPLICANT: Xie, Hanqing  
 ; APPLICANT: Dahari, Dvir  
 ; APPLICANT: Levanon, Erez  
 ; APPLICANT: Freilich, Shiri  
 ; APPLICANT: Beck, Nili  
 ; APPLICANT: Zhu, Wei-Yong  
 ; APPLICANT: Wasserman, Alon  
 ; APPLICANT: Hermesh, Chen  
 ; APPLICANT: Azar, Idit  
 ; APPLICANT: Bernstein, Jeanne  
 ; TITLE OF INVENTION: METHODS AND SYSTEMS USEFUL FOR ANNOTATING BIOMOLECULAR SEQUENCES  
 ; FILE REFERENCE: 02/23929  
 ; CURRENT APPLICATION NUMBER: US/11/443,428A  
 ; CURRENT FILING DATE: 2006-05-31  
 ; NUMBER OF SEQ ID NOS: 1034312  
 ; SOFTWARE: PatentIn version 3.1  
 ; SEQ ID NO 819810  
 ; LENGTH: 192  
 ; TYPE: PRT  
 ; ORGANISM: Homo sapiens  
 US-11-443-428A-819810

Query Match 100.0%; Score 882; DB 6; Length 192;

Best Local Similarity 100.0%;  
 Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```

Qy      1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60
         ||||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db      16 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 75
         ||||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Qy      61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLEMEG 120
         ||||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db      76 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLEMEG 135
         ||||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Qy      121 LFLAVDEIVDGGSVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177
         ||||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db      136 LFLAVDEIVDGGSVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 192
         ||||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

```

## RESULT 11

US-11-443-428A-819816  
 ; Sequence 819816, Application US/11443428A  
 ; Publication No. US20070083334A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Mintz, Liat  
 ; APPLICANT: Xie, Hanqing  
 ; APPLICANT: Dahari, Dvir  
 ; APPLICANT: Levanon, Erez  
 ; APPLICANT: Freilich, Shiri  
 ; APPLICANT: Beck, Nili  
 ; APPLICANT: Zhu, Wei-Yong  
 ; APPLICANT: Wasserman, Alon  
 ; APPLICANT: Hermesh, Chen  
 ; APPLICANT: Azar, Idit  
 ; APPLICANT: Bernstein, Jeanne  
 ; TITLE OF INVENTION: METHODS AND SYSTEMS USEFUL FOR ANNOTATING BIOMOLECULAR SEQUENCES  
 ; FILE REFERENCE: 02/23929  
 ; CURRENT APPLICATION NUMBER: US/11/443,428A  
 ; CURRENT FILING DATE: 2006-05-31  
 ; NUMBER OF SEQ ID NOS: 1034312  
 ; SOFTWARE: PatentIn version 3.1  
 ; SEQ ID NO 819816  
 ; LENGTH: 192  
 ; TYPE: PRT  
 ; ORGANISM: Homo sapiens  
 US-11-443-428A-819816

Query Match 100.0%; Score 882; DB 6; Length 192;  
 Best Local Similarity 100.0%;  
 Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```

Qy      1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60
         ||||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db      16 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 75
         ||||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Qy      61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLEMEG 120
         ||||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db      76 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLEMEG 135
         ||||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Qy      121 LFLAVDEIVDGGSVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177
         ||||||| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db      136 LFLAVDEIVDGGSVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 192
         ||||||| | | | | | | | | | | | | | | | | | | | | | | | | | | |

```

## RESULT 12

US-11-443-428A-819818  
 ; Sequence 819818, Application US/11443428A  
 ; Publication No. US20070083334A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Mintz, Liat

;
 APPLICANT: Xie, Hanqing  
 APPLICANT: Dahari, Dvir  
 APPLICANT: Levanon, Erez  
 APPLICANT: Freilich, Shiri  
 APPLICANT: Beck, Nili  
 APPLICANT: Zhu, Wei-Yong  
 APPLICANT: Wasserman, Alon  
 APPLICANT: Hermesh, Chen  
 APPLICANT: Azar, Idit  
 APPLICANT: Bernstein, Jeanne  
 TITLE OF INVENTION: METHODS AND SYSTEMS USEFUL FOR ANNOTATING BIOMOLECULAR SEQUENCES  
 FILE REFERENCE: 02/23929  
 CURRENT APPLICATION NUMBER: US/11/443,428A  
 CURRENT FILING DATE: 2006-05-31  
 NUMBER OF SEQ ID NOS: 1034312  
 SOFTWARE: PatentIn version 3.1  
 SEQ ID NO 819818  
 LENGTH: 192  
 TYPE: PRT  
 ORGANISM: Homo sapiens  
 US-11-443-428A-819818

Query Match 100.0%; Score 882; DB 6; Length 192;  
 Best Local Similarity 100.0%;  
 Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy	1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60
Db	16 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 75

Qy	61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKVNVEKRALLEMEG 120
Db	76 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKVNVEKRALLEMEG 135

Qy	121 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177
Db	136 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 192

RESULT 13

US-11-443-428A-819819

;
 Sequence 819819, Application US/11443428A  
 Publication No. US20070083334A1  
 GENERAL INFORMATION:  
 APPLICANT: Mintz, Liat  
 APPLICANT: Xie, Hanqing  
 APPLICANT: Dahari, Dvir  
 APPLICANT: Levanon, Erez  
 APPLICANT: Freilich, Shiri  
 APPLICANT: Beck, Nili  
 APPLICANT: Zhu, Wei-Yong  
 APPLICANT: Wasserman, Alon  
 APPLICANT: Hermesh, Chen  
 APPLICANT: Azar, Idit  
 APPLICANT: Bernstein, Jeanne  
 TITLE OF INVENTION: METHODS AND SYSTEMS USEFUL FOR ANNOTATING BIOMOLECULAR SEQUENCES  
 FILE REFERENCE: 02/23929  
 CURRENT APPLICATION NUMBER: US/11/443,428A  
 CURRENT FILING DATE: 2006-05-31  
 NUMBER OF SEQ ID NOS: 1034312  
 SOFTWARE: PatentIn version 3.1  
 SEQ ID NO 819819  
 LENGTH: 192  
 TYPE: PRT  
 ORGANISM: Homo sapiens  
 US-11-443-428A-819819

Query Match 100.0%; Score 882; DB 6; Length 192;  
 Best Local Similarity 100.0%;  
 Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60  
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 Db 16 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 75

Qy 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLEMEG 120  
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 Db 76 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLEMEG 135

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 Db 136 LFLAVDEIVDGIVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 192

## RESULT 14

US-11-443-428A-819821  
 ; Sequence 819821, Application US/11443428A  
 ; Publication No. US20070083334A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Mintz, Liat  
 ; APPLICANT: Xie, Hanqing  
 ; APPLICANT: Dahari, Dvir  
 ; APPLICANT: Levanon, Erez  
 ; APPLICANT: Freilich, Shiri  
 ; APPLICANT: Beck, Nili  
 ; APPLICANT: Zhu, Wei-Yong  
 ; APPLICANT: Wasserman, Alon  
 ; APPLICANT: Hermesh, Chen  
 ; APPLICANT: Azar, Idit  
 ; APPLICANT: Bernstein, Jeanne  
 ; TITLE OF INVENTION: METHODS AND SYSTEMS USEFUL FOR ANNOTATING BIOMOLECULAR SEQUENCES  
 ; FILE REFERENCE: 02/23929  
 ; CURRENT APPLICATION NUMBER: US/11/443,428A  
 ; CURRENT FILING DATE: 2006-05-31  
 ; NUMBER OF SEQ ID NOS: 1034312  
 ; SOFTWARE: PatentIn version 3.1  
 ; SEQ ID NO 819821  
 ; LENGTH: 192  
 ; TYPE: PRT  
 ; ORGANISM: Homo sapiens  
 US-11-443-428A-819821

Query Match 100.0%; Score 882; DB 6; Length 192;  
 Best Local Similarity 100.0%;  
 Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60  
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Qy 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLEMEG 120  
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 Db 136 LFLAVDEIVDGIVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 192

## RESULT 15

US-11-443-428A-819823  
 ; Sequence 819823, Application US/11443428A  
 ; Publication No. US20070083334A1  
 ; GENERAL INFORMATION:

; APPLICANT: Mintz, Liat  
; APPLICANT: Xie, Hanqing  
; APPLICANT: Dahari, Dvir  
; APPLICANT: Levanon, Erez  
; APPLICANT: Freilich, Shiri  
; APPLICANT: Beck, Nili  
; APPLICANT: Zhu, Wei-Yong  
; APPLICANT: Wasserman, Alon  
; APPLICANT: Hermesh, Chen  
; APPLICANT: Azar, Idit  
; APPLICANT: Bernstein, Jeanne  
; TITLE OF INVENTION: METHODS AND SYSTEMS USEFUL FOR ANNOTATING BIOMOLECULAR SEQUENCES  
; FILE REFERENCE: 02/23929  
; CURRENT APPLICATION NUMBER: US/11/443,428A  
; CURRENT FILING DATE: 2006-05-31  
; NUMBER OF SEQ ID NOS: 1034312  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 819823  
; LENGTH: 192  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-11-443-428A-819823

Query Match 100.0%; Score 882; DB 6; Length 192;  
Best Local Similarity 100.0%;  
Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db 16 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 75

Qy 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLEMEG 120  
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Db 76 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLEMEG 135

Qy 121 LFLAVDEIVDGIVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177  
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Db 136 LFLAVDEIVDGIVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 192

Search completed: December 14, 2010, 11:32:16

Job time : 142.65 secs

..... SCORE 3.0 .....

# SCORE Search Results Details for Application 09556178 and Search Result 20101214\_103255\_us-09-556-178-5.rai.

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This page gives you Search Results detail for the Application 09556178 and Search Result 20101214\_103255\_us-09-556-178-5.rai.

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GenCore version 6.3  
Copyright (c) 1993 - 2010 Biocceleration Ltd.

OM protein - protein search, using sw model

Run on: December 14, 2010, 11:24:20 ; Search time 25 Seconds  
(without alignments)  
2826.599 Million cell updates/sec

Title: US-09-556-178-5  
Perfect score: 882  
Sequence: 1 MEALILEPSLYTVKAILILD.....QTVSQVLQSAKEQIKWSLLR 177

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 2170800 seqs, 396181022 residues

Total number of hits satisfying chosen parameters: 2170800

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : Issued\_Patents\_AA:  
1: /ABSS/Data/CRF/ptodata/1/iaa/5\_COMB.pep:  
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SUMMARIES

%

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		Match	Length	DB	ID
1	882	100.0	177	1	US-08-967-364-5
2	882	100.0	177	2	US-09-368-408-5
3	882	100.0	177	3	US-11-443-428A-819809
4	882	100.0	192	3	US-11-443-428A-819804
5	882	100.0	192	3	US-11-443-428A-819805
6	882	100.0	192	3	US-11-443-428A-819806
7	882	100.0	192	3	US-11-443-428A-819808
8	882	100.0	192	3	US-11-443-428A-819810
9	882	100.0	192	3	US-11-443-428A-819816
10	882	100.0	192	3	US-11-443-428A-819818

11	882	100.0	192	3	US-11-443-428A-819819	Sequence 819819,
12	882	100.0	192	3	US-11-443-428A-819821	Sequence 819821,
13	882	100.0	192	3	US-11-443-428A-819823	Sequence 819823,
14	882	100.0	192	3	US-11-443-428A-819825	Sequence 819825,
15	882	100.0	200	3	US-11-443-428A-819807	Sequence 819807,
16	882	100.0	205	3	US-11-443-428A-819812	Sequence 819812,
17	875	99.2	177	1	US-08-967-364-9	Sequence 9, Appli
18	875	99.2	177	2	US-09-368-408-9	Sequence 9, Appli
19	868	98.4	182	3	US-11-443-428A-819814	Sequence 819814,
20	858	97.3	172	3	US-11-443-428A-819813	Sequence 819813,
21	856	97.1	177	3	US-11-443-428A-819815	Sequence 819815,
22	856	97.1	178	3	US-11-443-428A-819811	Sequence 819811,
23	701	79.5	173	3	US-11-443-428A-819820	Sequence 819820,
24	673	76.3	214	3	US-11-443-428A-823399	Sequence 823399,
25	671	76.1	137	2	US-09-513-999C-5551	Sequence 5551, Ap
26	671	76.1	137	3	US-10-793-479-5551	Sequence 5551, Ap
27	542	61.5	134	3	US-11-443-428A-819826	Sequence 819826,
28	518	58.7	136	3	US-11-443-428A-823401	Sequence 823401,
29	510	57.8	169	3	US-11-443-428A-823406	Sequence 823406,
30	487	55.2	177	3	US-11-443-428A-819824	Sequence 819824,
31	454	51.5	138	3	US-11-443-428A-823403	Sequence 823403,
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33	360.5	40.9	95	3	US-11-443-428A-1002249	Sequence 1002249,
34	357	40.5	177	3	US-10-703-032-129014	Sequence 129014,
35	357	40.5	177	3	US-11-241-607-37572	Sequence 37572, A
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37	344.5	39.1	176	3	US-11-241-607-52299	Sequence 52299, A
38	340.5	38.6	176	3	US-10-767-701-39442	Sequence 39442, A
39	340	38.5	177	3	US-10-703-032-107720	Sequence 107720,
40	306.5	34.8	197	3	US-10-703-032-105938	Sequence 105938,
41	260	29.5	186	3	US-10-703-032-106783	Sequence 106783,
42	252	28.6	126	3	US-11-443-428A-819822	Sequence 819822,
43	250	28.3	97	3	US-11-443-428A-949290	Sequence 949290,
44	243	27.6	119	3	US-11-241-607-37573	Sequence 37573, A
45	228	25.9	116	3	US-10-703-032-128901	Sequence 128901,

## ALIGNMENTS

## RESULT 1

US-08-967-364-5  
; Sequence 5, Application US/08967364  
; Patent No. 5989859  
; GENERAL INFORMATION:  
; APPLICANT: Bandman, Olga  
; APPLICANT: Lal, Preeti  
; APPLICANT: Guegler, Karl J.  
; APPLICANT: Shah, Purvi  
; APPLICANT: Corley, Neil C.  
; TITLE OF INVENTION: VESICLE TRAFFICKING PROTEINS  
; NUMBER OF SEQUENCES: 9  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Incyte Pharmaceuticals, Inc.  
; STREET: 3174 Porter Dr.  
; CITY: Palo Alto  
; STATE: CA  
; COUNTRY: USA  
; ZIP: 94304  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Diskette  
; COMPUTER: IBM Compatible  
; OPERATING SYSTEM: DOS  
; SOFTWARE: FastSEQ for Windows Version 2.0  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/967,364  
; FILING DATE: No. 5989859ember 7, 1997

;
 PRIOR APPLICATION DATA:  
 ; APPLICATION NUMBER:  
 ; FILING DATE:  
 ; ATTORNEY/AGENT INFORMATION:  
 ; NAME: Cerrone, Michael C.  
 ; REGISTRATION NUMBER: 39,132  
 ; REFERENCE/DOCKET NUMBER: PF-0417 US  
 ; TELECOMMUNICATION INFORMATION:  
 ; TELEPHONE: 650-855-0555  
 ; TELEFAX: 650-845-4166  
 ; INFORMATION FOR SEQ ID NO: 5:  
 ; SEQUENCE CHARACTERISTICS:  
 ; LENGTH: 177 amino acids  
 ; TYPE: amino acid  
 ; STRANDEDNESS: single  
 ; TOPOLOGY: linear  
 ; IMMEDIATE SOURCE:  
 ; LIBRARY: HEAONOT03  
 ; CLONE: 3086794  
 US-08-967-364-5

Query Match 100.0%; Score 882; DB 1; Length 177;  
 Best Local Similarity 100.0%;  
 Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db	1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFKNIFNKTHRTDSEIA 60
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Qy	121 LFLAVDEIVDGIVILESDPQQVVRVALRGEDVPLTEQTVSQLQSAKEQIKWSLLR 177
Db	121 LFLAVDEIVDGIVILESDPQQVVRVALRGEDVPLTEQTVSQLQSAKEQIKWSLLR 177

## RESULT 2

US-09-368-408-5  
 ; Sequence 5, Application US/09368408  
 ; Patent No. 6071703  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Bandman, Olga  
 ; APPLICANT: Lal, Preeti  
 ; APPLICANT: Guegler, Karl J.  
 ; APPLICANT: Shah, Purvi  
 ; APPLICANT: Corley, Neil C.  
 ; TITLE OF INVENTION: VESICLE TRAFFICKING PROTEINS  
 ; NUMBER OF SEQUENCES: 9  
 ; CORRESPONDENCE ADDRESS:  
 ; ADDRESSEE: Incyte Pharmaceuticals, Inc.  
 ; STREET: 3174 Porter Dr.  
 ; CITY: Palo Alto  
 ; STATE: CA  
 ; COUNTRY: USA  
 ; ZIP: 94304  
 ; COMPUTER READABLE FORM:  
 ; MEDIUM TYPE: Diskette  
 ; COMPUTER: IBM Compatible  
 ; OPERATING SYSTEM: DOS  
 ; SOFTWARE: FastSEQ for Windows Version 2.0  
 ; CURRENT APPLICATION DATA:  
 ; APPLICATION NUMBER: US/09/368,408  
 ; FILING DATE:  
 ; PRIOR APPLICATION DATA:  
 ; APPLICATION NUMBER: 08/967,364

;
; FILING DATE:  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Cerrone, Michael C.  
; REGISTRATION NUMBER: 39,132  
; REFERENCE/DOCKET NUMBER: PF-0417 US  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 650-855-0555  
; TELEFAX: 650-845-4166  
; INFORMATION FOR SEQ ID NO: 5:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 177 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; IMMEDIATE SOURCE:  
; LIBRARY: HEAONOT03  
; CLONE: 3086794  
US-09-368-408-5

Query Match 100.0%; Score 882; DB 2; Length 177;  
Best Local Similarity 100.0%;  
Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60  
|||||||

Db 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60

Qy 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLEMEG 120  
|||||||

Db 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLEMEG 120

Qy 121 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177  
|||||||

Db 121 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177

## RESULT 3

US-11-443-428A-819809

; Sequence 819809, Application US/11443428A

; Patent No. 7745391

; GENERAL INFORMATION:

; APPLICANT: Mintz, Liat

; APPLICANT: Xie, Hanqing

; APPLICANT: Dahari, Dvir

; APPLICANT: Levanon, Erez

; APPLICANT: Freilich, Shiri

; APPLICANT: Beck, Nili

; APPLICANT: Zhu, Wei-Yong

; APPLICANT: Wasserman, Alon

; APPLICANT: Hermesh, Chen

; APPLICANT: Azar, Idit

; APPLICANT: Bernstein, Jeanne

; TITLE OF INVENTION: METHODS AND SYSTEMS USEFUL FOR ANNOTATING BIOMOLECULAR SEQUENCES

; FILE REFERENCE: 02/23929

; CURRENT APPLICATION NUMBER: US/11/443,428A

; CURRENT FILING DATE: 2006-05-31

; NUMBER OF SEQ ID NOS: 1034312

; SOFTWARE: PatentIn version 3.1

; SEQ ID NO 819809

; LENGTH: 177

; TYPE: PRT

; ORGANISM: Homo sapiens

US-11-443-428A-819809

Query Match 100.0%; Score 882; DB 3; Length 177;  
Best Local Similarity 100.0%;  
Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db	1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYP SVKEQKAF EKNF NKTHRTDSEIA 60
Qy	61 LLEGLTVVYKSSIDL FYVIGSSYENELMLMAVLNCLFDLS SQLRKNVEKR ALLENMEG 120 
Db	61 LLEGLTVVYKSSIDL FYVIGSSYENELMLMAVLNCLFDLS SQLRKNVEKR ALLENMEG 120
Qy	121 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVL QSAKEQIKWSLLR 177 
Db	121 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVL QSAKEQIKWSLLR 177

## RESULT 4

US-11-443-428A-819804  
; Sequence 819804, Application US/11443428A  
; Patent No. 7745391  
; GENERAL INFORMATION:  
; APPLICANT: Mintz, Liat  
; APPLICANT: Xie, Hanqing  
; APPLICANT: Dahari, Dvir  
; APPLICANT: Levanon, Erez  
; APPLICANT: Freilich, Shiri  
; APPLICANT: Beck, Nili  
; APPLICANT: Zhu, Wei-Yong  
; APPLICANT: Wasserman, Alon  
; APPLICANT: Hermesh, Chen  
; APPLICANT: Azar, Idit  
; APPLICANT: Bernstein, Jeanne  
; TITLE OF INVENTION: METHODS AND SYSTEMS USEFUL FOR ANNOTATING BIOMOLECULAR SEQUENCES  
; FILE REFERENCE: 02/23929  
; CURRENT APPLICATION NUMBER: US/11/443,428A  
; CURRENT FILING DATE: 2006-05-31  
; NUMBER OF SEQ ID NOS: 1034312  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 819804  
; LENGTH: 192  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-11-443-428A-819804

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Query Match          100.0%;  Score 882;  DB 3;  Length 192;
Best Local Similarity 100.0%;
Matches 177;  Conservative 0;  Mismatches 0;  Indels 0;  Gaps 0;

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Db	136	LFLAVDEIVDGGVILESDPQQVVHRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR	192

## RESULT 5

US-11-443-428A-819805  
; Sequence 819805, Application US/11443428A  
; Patent No. 7745391  
; GENERAL INFORMATION:  
; APPLICANT: Mintz, Liat  
; APPLICANT: Xie, Hanqing  
; APPLICANT: Dahari, Dvir

;
 APPLICANT: Levanon, Erez  
 APPLICANT: Freilich, Shiri  
 APPLICANT: Beck, Nili  
 APPLICANT: Zhu, Wei-Yong  
 APPLICANT: Wasserman, Alon  
 APPLICANT: Hermesh, Chen  
 APPLICANT: Azar, Idit  
 APPLICANT: Bernstein, Jeanne  
 TITLE OF INVENTION: METHODS AND SYSTEMS USEFUL FOR ANNOTATING BIOMOLECULAR SEQUENCES  
 FILE REFERENCE: 02/23929  
 CURRENT APPLICATION NUMBER: US/11/443,428A  
 CURRENT FILING DATE: 2006-05-31  
 NUMBER OF SEQ ID NOS: 1034312  
 SOFTWARE: PatentIn version 3.1  
 SEQ ID NO 819805  
 LENGTH: 192  
 TYPE: PRT  
 ORGANISM: Homo sapiens  
 US-11-443-428A-819805

Query Match 100.0%; Score 882; DB 3; Length 192;  
 Best Local Similarity 100.0%;  
 Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
  
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 Db 16 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFKNIFNKTHRTDSEIA 75  
  
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RESULT 6  
 US-11-443-428A-819806  
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 ; GENERAL INFORMATION:  
 ; APPLICANT: Mintz, Liat  
 ; APPLICANT: Xie, Hanqing  
 ; APPLICANT: Dahari, Dvir  
 ; APPLICANT: Levanon, Erez  
 ; APPLICANT: Freilich, Shiri  
 ; APPLICANT: Beck, Nili  
 ; APPLICANT: Zhu, Wei-Yong  
 ; APPLICANT: Wasserman, Alon  
 ; APPLICANT: Hermesh, Chen  
 ; APPLICANT: Azar, Idit  
 ; APPLICANT: Bernstein, Jeanne  
 ; TITLE OF INVENTION: METHODS AND SYSTEMS USEFUL FOR ANNOTATING BIOMOLECULAR SEQUENCES  
 ; FILE REFERENCE: 02/23929  
 ; CURRENT APPLICATION NUMBER: US/11/443,428A  
 ; CURRENT FILING DATE: 2006-05-31  
 ; NUMBER OF SEQ ID NOS: 1034312  
 ; SOFTWARE: PatentIn version 3.1  
 ; SEQ ID NO 819806  
 ; LENGTH: 192  
 ; TYPE: PRT  
 ; ORGANISM: Homo sapiens  
 US-11-443-428A-819806

Query Match 100.0%; Score 882; DB 3; Length 192;  
 Best Local Similarity 100.0%;

Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60  
       |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||  

Db 16 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 75

Qy 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLELENMEG 120  
       |||||||||||||||||||||||||||||||||||||||||||||||||||||||  

Db 76 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLELENMEG 135

Qy 121 LFLAVDEIVDGIVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177  
       |||||||||||||||||||||||||||||||||||||||||||||||||||  

Db 136 LFLAVDEIVDGIVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 192

## RESULT 7

US-11-443-428A-819808  
  ; Sequence 819808, Application US/11443428A  
  ; Patent No. 7745391  
  ; GENERAL INFORMATION:  
  ; APPLICANT: Mintz, Liat  
  ; APPLICANT: Xie, Hanqing  
  ; APPLICANT: Dahari, Dvir  
  ; APPLICANT: Levanon, Erez  
  ; APPLICANT: Freilich, Shiri  
  ; APPLICANT: Beck, Nili  
  ; APPLICANT: Zhu, Wei-Yong  
  ; APPLICANT: Wasserman, Alon  
  ; APPLICANT: Hermesh, Chen  
  ; APPLICANT: Azar, Idit  
  ; APPLICANT: Bernstein, Jeanne  
  ; TITLE OF INVENTION: METHODS AND SYSTEMS USEFUL FOR ANNOTATING BIOMOLECULAR SEQUENCES  
  ; FILE REFERENCE: 02/23929  
  ; CURRENT APPLICATION NUMBER: US/11/443,428A  
  ; CURRENT FILING DATE: 2006-05-31  
  ; NUMBER OF SEQ ID NOS: 1034312  
  ; SOFTWARE: PatentIn version 3.1  
  ; SEQ ID NO 819808  
  ; LENGTH: 192  
  ; TYPE: PRT  
  ; ORGANISM: Homo sapiens  
 US-11-443-428A-819808

Query Match 100.0%; Score 882; DB 3; Length 192;  
 Best Local Similarity 100.0%;  
 Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60  
       |||||||||||||||||||||||||||||||||||||||||||||||  

Db 16 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 75

Qy 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLELENMEG 120  
       |||||||||||||||||||||||||||||||||||||||||||  

Db 76 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLELENMEG 135

Qy 121 LFLAVDEIVDGIVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177  
       |||||||||||||||||||||||||||||||||||||||  

Db 136 LFLAVDEIVDGIVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 192

## RESULT 8

US-11-443-428A-819810  
  ; Sequence 819810, Application US/11443428A  
  ; Patent No. 7745391  
  ; GENERAL INFORMATION:  
  ; APPLICANT: Mintz, Liat  
  ; APPLICANT: Xie, Hanqing

;
 APPLICANT: Dahari, Dvir
 APPLICANT: Levanon, Erez
 APPLICANT: Freilich, Shiri
 APPLICANT: Beck, Nili
 APPLICANT: Zhu, Wei-Yong
 APPLICANT: Wasserman, Alon
 APPLICANT: Hermesh, Chen
 APPLICANT: Azar, Idit
 APPLICANT: Bernstein, Jeanne
 TITLE OF INVENTION: METHODS AND SYSTEMS USEFUL FOR ANNOTATING BIOMOLECULAR SEQUENCES
 FILE REFERENCE: 02/23929
 CURRENT APPLICATION NUMBER: US/11/443,428A
 CURRENT FILING DATE: 2006-05-31
 NUMBER OF SEQ ID NOS: 1034312
 SOFTWARE: PatentIn version 3.1
 SEQ ID NO 819810
 LENGTH: 192
 TYPE: PRT
 ORGANISM: Homo sapiens
 US-11-443-428A-819810

Query Match 100.0%; Score 882; DB 3; Length 192;  
 Best Local Similarity 100.0%;  
 Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy	1	MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA	60
Db	16	MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA	75
Qy	61	LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLEMEG	120
Db	76	LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLEMEG	135
Qy	121	LFLAVDEIVDGIVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR	177
Db	136	LFLAVDEIVDGIVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR	192

## RESULT 9

US-11-443-428A-819816
 ; Sequence 819816, Application US/11443428A
 ; Patent No. 7745391
 ; GENERAL INFORMATION:
 ; APPLICANT: Mintz, Liat
 ; APPLICANT: Xie, Hanqing
 ; APPLICANT: Dahari, Dvir
 ; APPLICANT: Levanon, Erez
 ; APPLICANT: Freilich, Shiri
 ; APPLICANT: Beck, Nili
 ; APPLICANT: Zhu, Wei-Yong
 ; APPLICANT: Wasserman, Alon
 ; APPLICANT: Hermesh, Chen
 ; APPLICANT: Azar, Idit
 ; APPLICANT: Bernstein, Jeanne
 ; TITLE OF INVENTION: METHODS AND SYSTEMS USEFUL FOR ANNOTATING BIOMOLECULAR SEQUENCES
 ; FILE REFERENCE: 02/23929
 ; CURRENT APPLICATION NUMBER: US/11/443,428A
 ; CURRENT FILING DATE: 2006-05-31
 ; NUMBER OF SEQ ID NOS: 1034312
 ; SOFTWARE: PatentIn version 3.1
 ; SEQ ID NO 819816
 ; LENGTH: 192
 ; TYPE: PRT
 ; ORGANISM: Homo sapiens
 US-11-443-428A-819816

Query Match 100.0%; Score 882; DB 3; Length 192;

Best Local Similarity 100.0%;  
 Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy	1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA	60
Db	16 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA	75
Qy	61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLEMEG	120
Db	76 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLEMEG	135
Qy	121 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR	177
Db	136 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR	192

## RESULT 10

US-11-443-428A-819818  
 ; Sequence 819818, Application US/11443428A  
 ; Patent No. 7745391  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Mintz, Liat  
 ; APPLICANT: Xie, Hanqing  
 ; APPLICANT: Dahari, Dvir  
 ; APPLICANT: Levanon, Erez  
 ; APPLICANT: Freilich, Shiri  
 ; APPLICANT: Beck, Nili  
 ; APPLICANT: Zhu, Wei-Yong  
 ; APPLICANT: Wasserman, Alon  
 ; APPLICANT: Hermesh, Chen  
 ; APPLICANT: Azar, Idit  
 ; APPLICANT: Bernstein, Jeanne  
 ; TITLE OF INVENTION: METHODS AND SYSTEMS USEFUL FOR ANNOTATING BIOMOLECULAR SEQUENCES  
 ; FILE REFERENCE: 02/23929  
 ; CURRENT APPLICATION NUMBER: US/11/443,428A  
 ; CURRENT FILING DATE: 2006-05-31  
 ; NUMBER OF SEQ ID NOS: 1034312  
 ; SOFTWARE: PatentIn version 3.1  
 ; SEQ ID NO 819818  
 ; LENGTH: 192  
 ; TYPE: PRT  
 ; ORGANISM: Homo sapiens  
 US-11-443-428A-819818

Query Match 100.0%; Score 882; DB 3; Length 192;  
 Best Local Similarity 100.0%;  
 Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy	1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA	60
Db	16 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA	75
Qy	61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLEMEG	120
Db	76 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLEMEG	135
Qy	121 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR	177
Db	136 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR	192

## RESULT 11

US-11-443-428A-819819  
 ; Sequence 819819, Application US/11443428A  
 ; Patent No. 7745391  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Mintz, Liat

;
 APPLICANT: Xie, Hanqing  
 APPLICANT: Dahari, Dvir  
 APPLICANT: Levanon, Erez  
 APPLICANT: Freilich, Shiri  
 APPLICANT: Beck, Nili  
 APPLICANT: Zhu, Wei-Yong  
 APPLICANT: Wasserman, Alon  
 APPLICANT: Hermesh, Chen  
 APPLICANT: Azar, Idit  
 APPLICANT: Bernstein, Jeanne  
 TITLE OF INVENTION: METHODS AND SYSTEMS USEFUL FOR ANNOTATING BIOMOLECULAR SEQUENCES  
 FILE REFERENCE: 02/23929  
 CURRENT APPLICATION NUMBER: US/11/443,428A  
 CURRENT FILING DATE: 2006-05-31  
 NUMBER OF SEQ ID NOS: 1034312  
 SOFTWARE: PatentIn version 3.1  
 SEQ ID NO 819819  
 LENGTH: 192  
 TYPE: PRT  
 ORGANISM: Homo sapiens  
 US-11-443-428A-819819

Query Match 100.0%; Score 882; DB 3; Length 192;  
 Best Local Similarity 100.0%;  
 Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy	1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA	60
Db	16 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA	75
Qy	61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKVNVEKRALLEMEG	120
Db	76 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKVNVEKRALLEMEG	135
Qy	121 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR	177
Db	136 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR	192

RESULT 12  
 US-11-443-428A-819821  
 ; Sequence 819821, Application US/11443428A  
 ; Patent No. 7745391  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Mintz, Liat  
 ; APPLICANT: Xie, Hanqing  
 ; APPLICANT: Dahari, Dvir  
 ; APPLICANT: Levanon, Erez  
 ; APPLICANT: Freilich, Shiri  
 ; APPLICANT: Beck, Nili  
 ; APPLICANT: Zhu, Wei-Yong  
 ; APPLICANT: Wasserman, Alon  
 ; APPLICANT: Hermesh, Chen  
 ; APPLICANT: Azar, Idit  
 ; APPLICANT: Bernstein, Jeanne  
 ; TITLE OF INVENTION: METHODS AND SYSTEMS USEFUL FOR ANNOTATING BIOMOLECULAR SEQUENCES  
 ; FILE REFERENCE: 02/23929  
 ; CURRENT APPLICATION NUMBER: US/11/443,428A  
 ; CURRENT FILING DATE: 2006-05-31  
 ; NUMBER OF SEQ ID NOS: 1034312  
 ; SOFTWARE: PatentIn version 3.1  
 ; SEQ ID NO 819821  
 ; LENGTH: 192  
 ; TYPE: PRT  
 ; ORGANISM: Homo sapiens  
 US-11-443-428A-819821

Query Match 100.0%; Score 882; DB 3; Length 192;  
 Best Local Similarity 100.0%;  
 Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60  
       |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||  
 Db 16 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 75

Qy 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLEMEG 120  
       |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||  
 Db 76 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLEMEG 135

Qy 121 LFLAVDEIVDGIVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177  
       |||||||||||||||||||||||||||||||||||||||||||||||||||||||  
 Db 136 LFLAVDEIVDGIVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 192

## RESULT 13

US-11-443-428A-819823  
 ; Sequence 819823, Application US/11443428A  
 ; Patent No. 7745391  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Mintz, Liat  
 ; APPLICANT: Xie, Hanqing  
 ; APPLICANT: Dahari, Dvir  
 ; APPLICANT: Levanon, Erez  
 ; APPLICANT: Freilich, Shiri  
 ; APPLICANT: Beck, Nili  
 ; APPLICANT: Zhu, Wei-Yong  
 ; APPLICANT: Wasserman, Alon  
 ; APPLICANT: Hermesh, Chen  
 ; APPLICANT: Azar, Idit  
 ; APPLICANT: Bernstein, Jeanne  
 ; TITLE OF INVENTION: METHODS AND SYSTEMS USEFUL FOR ANNOTATING BIOMOLECULAR SEQUENCES  
 ; FILE REFERENCE: 02/23929  
 ; CURRENT APPLICATION NUMBER: US/11/443,428A  
 ; CURRENT FILING DATE: 2006-05-31  
 ; NUMBER OF SEQ ID NOS: 1034312  
 ; SOFTWARE: PatentIn version 3.1  
 ; SEQ ID NO 819823  
 ; LENGTH: 192  
 ; TYPE: PRT  
 ; ORGANISM: Homo sapiens  
 US-11-443-428A-819823

Query Match 100.0%; Score 882; DB 3; Length 192;  
 Best Local Similarity 100.0%;  
 Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60  
       |||||||||||||||||||||||||||||||||||||||||||||||||||  
 Db 16 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 75

Qy 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLEMEG 120  
       |||||||||||||||||||||||||||||||||||||||||||||||||||  
 Db 76 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLEMEG 135

Qy 121 LFLAVDEIVDGIVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177  
       |||||||||||||||||||||||||||||||||||||||||||||||  
 Db 136 LFLAVDEIVDGIVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 192

## RESULT 14

US-11-443-428A-819825  
 ; Sequence 819825, Application US/11443428A  
 ; Patent No. 7745391  
 ; GENERAL INFORMATION:

;
 APPLICANT: Mintz, Liat  
 APPLICANT: Xie, Hanqing  
 APPLICANT: Dahari, Dvir  
 APPLICANT: Levanon, Erez  
 APPLICANT: Freilich, Shiri  
 APPLICANT: Beck, Nili  
 APPLICANT: Zhu, Wei-Yong  
 APPLICANT: Wasserman, Alon  
 APPLICANT: Hermesh, Chen  
 APPLICANT: Azar, Idit  
 APPLICANT: Bernstein, Jeanne  
 TITLE OF INVENTION: METHODS AND SYSTEMS USEFUL FOR ANNOTATING BIOMOLECULAR SEQUENCES  
 FILE REFERENCE: 02/23929  
 CURRENT APPLICATION NUMBER: US/11/443,428A  
 CURRENT FILING DATE: 2006-05-31  
 NUMBER OF SEQ ID NOS: 1034312  
 SOFTWARE: PatentIn version 3.1  
 SEQ ID NO 819825  
 LENGTH: 192  
 TYPE: PRT  
 ORGANISM: Homo sapiens  
 US-11-443-428A-819825

Query Match 100.0%; Score 882; DB 3; Length 192;  
 Best Local Similarity 100.0%;  
 Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 60  
           |||||||||||||||||||||||||||||||||||||||||||||||||||||||

Db 16 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFEKNIFNKTHRTDSEIA 75

Qy 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLEMEG 120  
           |||||||||||||||||||||||||||||||||||||||||||||||||||

Db 76 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLEMEG 135

Qy 121 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177  
           |||||||||||||||||||||||||||||||||||||||||||||||

Db 136 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 192

## RESULT 15

US-11-443-428A-819807  
 ; Sequence 819807, Application US/11/443,428A  
 ; Patent No. 7745391  
 ; GENERAL INFORMATION:  
 APPLICANT: Mintz, Liat  
 APPLICANT: Xie, Hanqing  
 APPLICANT: Dahari, Dvir  
 APPLICANT: Levanon, Erez  
 APPLICANT: Freilich, Shiri  
 APPLICANT: Beck, Nili  
 APPLICANT: Zhu, Wei-Yong  
 APPLICANT: Wasserman, Alon  
 APPLICANT: Hermesh, Chen  
 APPLICANT: Azar, Idit  
 APPLICANT: Bernstein, Jeanne  
 TITLE OF INVENTION: METHODS AND SYSTEMS USEFUL FOR ANNOTATING BIOMOLECULAR SEQUENCES  
 FILE REFERENCE: 02/23929  
 CURRENT APPLICATION NUMBER: US/11/443,428A  
 CURRENT FILING DATE: 2006-05-31  
 NUMBER OF SEQ ID NOS: 1034312  
 SOFTWARE: PatentIn version 3.1  
 SEQ ID NO 819807  
 LENGTH: 200  
 TYPE: PRT  
 ORGANISM: Homo sapiens  
 US-11-443-428A-819807

Query Match 100.0%; Score 882; DB 3; Length 200;  
Best Local Similarity 100.0%;  
Matches 177; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFKNIFNKTHRTDSEIA 60  
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||  
Db 24 MEALILEPSLYTVKAILILDNDGDRLFAKYDDTYPNVKEQKAFKNIFNKTHRTDSEIA 83

Qy 61 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLENMEG 120  
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||  
Db 84 LLEGLTVVYKSSIDLYFYVIGSSYENELMLMAVLNCLFDLSQMLRKNVEKRALLENMEG 143

Qy 121 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 177  
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||  
Db 144 LFLAVDEIVDGGVILESDPQQVVRVALRGEDVPLTEQTVSQVLQSAKEQIKWSLLR 200

Search completed: December 14, 2010, 11:25:12

Job time : 24.8086 secs

SCORE 3.0

# SCORE Search Results Details for Application 09556178 and Search Result 20101214\_103257\_us-09-556-178- 5.rapbn.

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This page gives you Search Results detail for the Application 09556178 and Search Result 20101214\_103257\_us-09-556-178-5.rapbn.

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OM protein - protein search, using sw model

Run on: December 14, 2010, 11:32:21 ; Search time 1 Seconds  
(without alignments)  
1087.643 Million cell updates/sec

Title: US-09-556-178-5  
Perfect score: 882  
Sequence: 1 MEALILEPSLYTVKAILILD.....QTVSQVLQSAKEQIKWSLLR 177

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 23285 seqs, 2931653 residues

Total number of hits satisfying chosen parameters: 23285

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : Published\_Applications\_AA\_New:  
1: /ABSS/Data/CRF/ptodata/2/pubpaa/US10\_NEW\_PUB.pep:  
2: /ABSS/Data/CRF/ptodata/2/pubpaa/US11\_NEW\_PUB.pep:  
3: /ABSS/Data/CRF/ptodata/2/pubpaa/US12\_NEW\_PUB.pep:  
SUMMARIES

%

Result No.	Query Score	Match	Length	DB	ID	Description
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1	74.5	8.4	379	3	US-12-800-898-1740	Sequence 1740, Ap
2	74	8.4	1297	3	US-12-781-078-7	Sequence 7, Appli
3	74	8.4	1297	3	US-12-781-099-7	Sequence 7, Appli
4	74	8.4	1297	3	US-12-781-106-7	Sequence 7, Appli
5	74	8.4	1297	3	US-12-781-113-7	Sequence 7, Appli
6	74	8.4	1297	3	US-12-781-126-7	Sequence 7, Appli
7	74	8.4	1297	3	US-12-781-216-7	Sequence 7, Appli
8	74	8.4	1297	3	US-12-781-244-7	Sequence 7, Appli
9	74	8.4	1297	3	US-12-781-261-7	Sequence 7, Appli
10	74	8.4	1297	3	US-12-781-284-7	Sequence 7, Appli
11	72.5	8.2	872	3	US-12-523-023-1	Sequence 1, Appli
12	71	8.0	788	3	US-12-739-689-55	Sequence 55, Appli
13	71	8.0	1979	3	US-12-739-689-47	Sequence 47, Appli
14	71	8.0	1979	3	US-12-739-723-41	Sequence 41, Appli

15	68	7.7	517	3	US-12-783-952-168	Sequence 168, App
16	67.5	7.7	1034	3	US-12-797-443-569	Sequence 569, App
17	67.5	7.7	1053	3	US-12-797-443-568	Sequence 568, App
18	67.5	7.7	1054	3	US-12-797-443-573	Sequence 573, App
19	67.5	7.7	1057	3	US-12-797-443-567	Sequence 567, App
20	67.5	7.7	1081	3	US-12-797-443-566	Sequence 566, App
21	67	7.6	285	3	US-12-625-053A-57	Sequence 57, Appl
22	67	7.6	297	3	US-12-800-898-2856	Sequence 2856, Ap
23	67	7.6	2325	3	US-12-739-689-28	Sequence 28, Appl
24	67	7.6	2325	3	US-12-739-723-30	Sequence 30, Appl
25	66.5	7.5	863	3	US-12-682-544-19	Sequence 19, Appl
26	66.5	7.5	1274	3	US-12-781-078-6	Sequence 6, Appli
27	66.5	7.5	1274	3	US-12-781-099-6	Sequence 6, Appli
28	66.5	7.5	1274	3	US-12-781-106-6	Sequence 6, Appli
29	66.5	7.5	1274	3	US-12-781-113-6	Sequence 6, Appli
30	66.5	7.5	1274	3	US-12-781-126-6	Sequence 6, Appli
31	66.5	7.5	1274	3	US-12-781-216-6	Sequence 6, Appli
32	66.5	7.5	1274	3	US-12-781-244-6	Sequence 6, Appli
33	66.5	7.5	1274	3	US-12-781-261-6	Sequence 6, Appli
34	66.5	7.5	1274	3	US-12-781-284-6	Sequence 6, Appli
35	66	7.5	940	3	US-12-789-112-2	Sequence 2, Appli
36	65.5	7.4	524	3	US-12-599-679-9	Sequence 9, Appli
37	65.5	7.4	1086	3	US-12-800-898-3614	Sequence 3614, Ap
38	64.5	7.3	128	3	US-12-800-898-2126	Sequence 2126, Ap
39	64.5	7.3	466	3	US-12-800-898-4120	Sequence 4120, Ap
40	64	7.3	315	3	US-12-800-898-3186	Sequence 3186, Ap
41	64	7.3	341	3	US-12-713-239-93	Sequence 93, Appl
42	63.5	7.2	352	3	US-12-086-571-57	Sequence 57, Appl
43	63.5	7.2	438	3	US-12-800-898-3508	Sequence 3508, Ap
44	63.5	7.2	519	3	US-12-671-898-61	Sequence 61, Appl
45	63.5	7.2	524	3	US-12-599-679-10	Sequence 10, Appl

## ALIGNMENTS

## RESULT 1

US-12-800-898-1740

; Sequence 1740, Application US/12800898  
; Publication No. US20100303822A1  
; GENERAL INFORMATION:  
; APPLICANT: MASIGNANI, Vega  
; APPLICANT: ARICO, Maria  
; TITLE OF INVENTION: POLYPEPTIDES FROM NON-TYPEABLE HAEMOPHILUS INFLUENZAE  
; FILE REFERENCE: PP022930.0003  
; CURRENT APPLICATION NUMBER: US/12/800,898  
; CURRENT FILING DATE: 2010-05-25  
; PRIOR APPLICATION NUMBER: US/11/596,557  
; PRIOR FILING DATE: 2006-11-14  
; PRIOR APPLICATION NUMBER: GB-0410866.8  
; PRIOR FILING DATE: 2004-05-14  
; NUMBER OF SEQ ID NOS: 5095  
; SOFTWARE: SeqWin99, version 1.0.4  
; SEQ ID NO 1740  
; LENGTH: 379  
; TYPE: PRT  
; ORGANISM: Haemophilus influenzae  
; FEATURE:  
; OTHER INFORMATION: Name: NTH0958  
US-12-800-898-1740

Query Match 8.4%; Score 74.5; DB 3; Length 379;  
Best Local Similarity 23.2%;  
Matches 46; Conservative 34; Mismatches 63; Indels 55; Gaps 10;

Qy 8 PSLYTVKAILILDN-----DGDRL---FAKYDDTYPYPSVKEQKAFENI--FNKT-- 52  
|:| | |:::| | |||| | :| :| :| |||: |::|